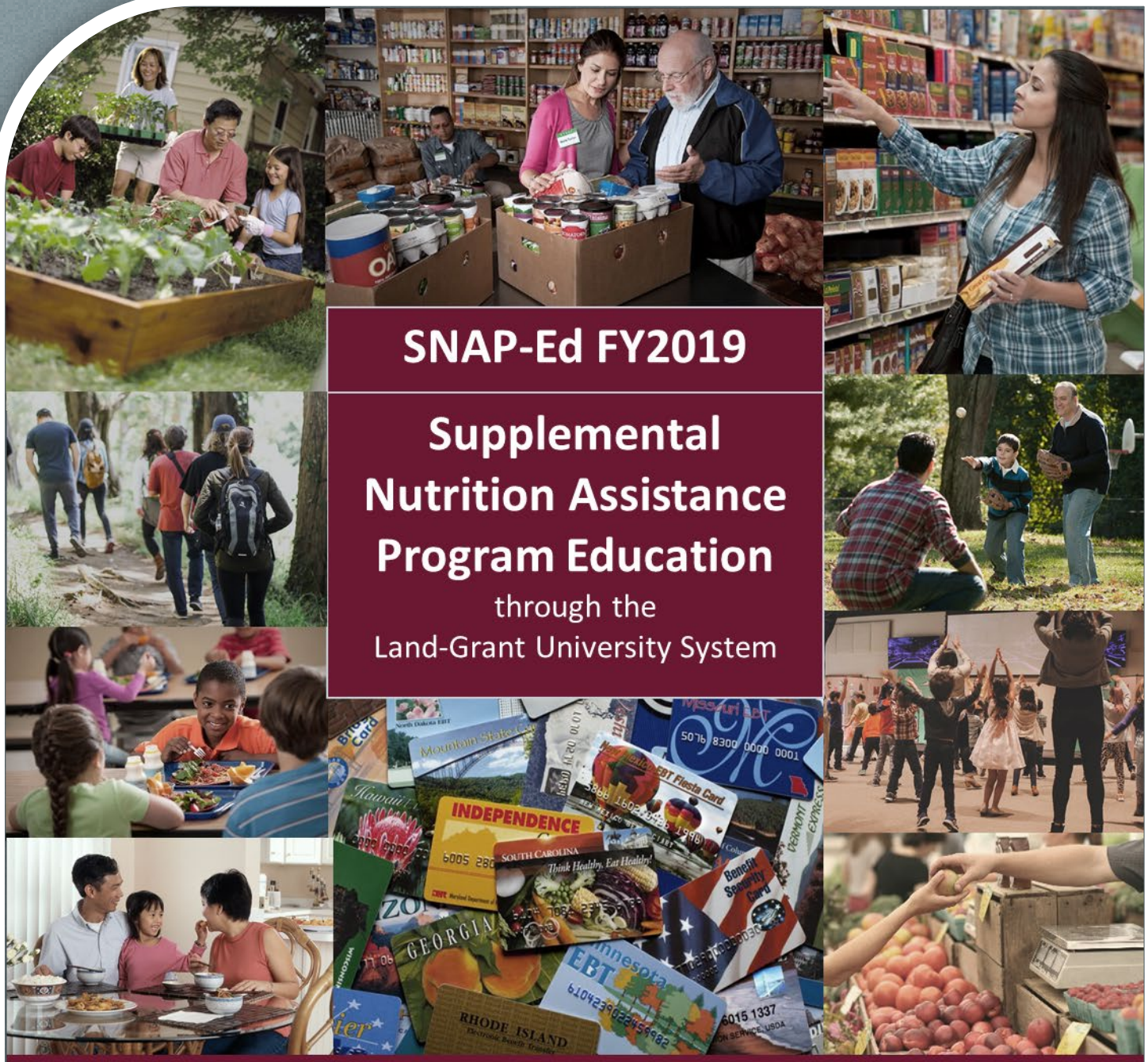

SNAP-Ed FY2019

Supplemental Nutrition Assistance Program Education

through the
Land-Grant University System

A Retrospective Review of Land-Grant University SNAP-Ed Programs and Impacts

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through the National Land-Grant University SNAP-Ed Assessment

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Thank you!

2020-2021 LGU SNAP-Ed Program Development Team Executive Committee
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Contents

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Executive Summary

The Supplemental Nutrition Assistance Program (SNAP) is a signature federal program that in FY2019 provided financial assistance to 35 million low-income Americans. SNAP is a focused program that increases food access, reduces hunger, and improves the nutrition and health of low-income American families.

It is in the interest of the nation and individuals that SNAP recipients be equipped with evidence-based information to guide the selection of healthy food purchases with their SNAP benefits and to engage in food preparation practices and behaviors that lead to improved health and quality of life outcomes. The provision of this information is accomplished through a formal SNAP-Education (SNAP-Ed) program, which is financially supported by the United States Department of Agriculture's Food and Nutrition Service (FNS) and collaboratively supported by the National Institute of Food and Agriculture (NIFA).

The United States' unique system of land-grant universities plays a central role in the delivery of SNAP-Ed across the nation. Land-grant universities (LGUs) are the home to Cooperative Extension, a long-standing outreach system that delivers educational content and best-practice knowledge to individuals and families at a local level. With direct presence in most U.S. states and territories, LGUs lead or play a significant role in delivering SNAP-Ed across the country. Through LGUs, SNAP-Ed focuses on the following missions, as defined by FNS:

> *Implementing strategies or interventions, among other health promotion efforts, to help the SNAP-Ed target audience establish healthy eating habits and a physically active lifestyle [as well as to emphasize] primary prevention of diseases to help the SNAP-Ed target audience that has risk factors for nutrition-related chronic disease, such as obesity, prevent or postpone the onset of disease by establishing healthier eating habits and being more physically active.*[a]

SNAP is a crucial program of assistance for Americans that effectively pays for itself through improved outcomes for the U.S. economy.

In FY2019, SNAP provided approximately $60 billion in SNAP benefits to 35 million low-income U.S. residents – representing an average of $1,714 per recipient.

Research published in *JAMA Internal Medicine* finds that SNAP is associated nationally with lower healthcare expenditures of approximately $1,400 per participant per year.* In addition, access to healthy and nutritious food provides families with the daily energy requirements required to sustain employment, perform their work, and achieve in school. Each of these activities is critical to the ongoing performance of the U.S. economy and the realization of the full capabilities of individual Americans.

Through lowered healthcare costs, improved education, and workforce performance, it can be concluded that, in addition to improving the health and quality-of-life of millions of Americans, SNAP provides a net positive fiscal and output benefit for the United States economy.

*S.Berkowitz, H.. Seligman, J.Rigdon, et al. 2017. "Supplemental Nutrition Assistance Program (SNAP) Participation and Health Care Expenditures Among Low-Income Adults." JAMA Intern Med. 2017;177(11):1642-1649.

[a] *FY 2019 SNAP-Ed Plan Guidance*, accessed here: https://snaped.fns.usda.gov/snap/Guidance/FY2019SNAPEdPlanGuidanceFULL.pdf

The LGU SNAP-Ed programs are oriented around evidence-based nutrition education and obesity prevention provided to SNAP-eligible populations. SNAP-Ed takes a multi-faceted and multi-level approach to nutrition intervention, addressing health behaviors at both the individual and population levels through educational and community public health approaches. In addition to the provision of individual and group-based direct educational programming, LGUs are deploying social marketing approaches and are increasingly engaged in public health and structural program interventions using a Policy, Systems, and Environmental (PSE) change model. PSEs seek to inform and modify the practices and environments that influence nutrition, health, and physical activity for individuals across the lifespan. PSE changes are multi-level and complex, working to initiate positive outcomes where SNAP-eligible populations live, learn, work, shop, eat, and play.

LGU SNAP-Ed activities focus on achieving federal goals for the program through a focus on the following activity domains:

- **Healthy Eating** – Increasing the consumption of healthy foods and beverages (e.g. fruits, vegetables, water, etc.) and decreasing consumption of solid fats and high-sugar foods and beverages.
- **Physical Activity and Reduced Sedentary Behavior** – Increasing physical activity (exercise) levels and reducing sedentary time (i.e. sitting or lying down for long periods).
- **Food Safety** – Improving food handling and preparation techniques to prevent foodborne illness.
- **Food Resource Management and Food Security** – Increasing knowledge and use of budgeting, nutrition labels, coupons and sales, and other techniques to maintain a healthy diet using limited financial resources.

The Current Evaluation of LGU SNAP-Ed

This report is the fifth in a series of reports documenting the scope and impacts of SNAP-Ed conducted by LGUs (for Federal Fiscal Years 2002, 2005, 2010, 2015, and 2019). The previous report was published in September 2016 and reported results for Federal Fiscal Year 2015. Whereas the writing of the FY2015 report required consideration of changes in impacts based on the passage of the Healthy, Hunger-Free Kids Act of 2010, SNAP-Ed implementers surveyed for FY2019 were operating within largely the same system as respondents from FY2015. Indeed, findings presented here generally conform to the same trends, with much smaller changes than were noted in the prior report (between FY2010 and FY2015).

As before, this document reports the results of a detailed survey administered to the LGUs engaged in SNAP-Ed. The Community Nutrition Education (CNE) Logic Model was used as the foundation for collecting data for this report, similar to the previous reports generated for the LGU System.[b] The goal of the FY2019 report, as in the FY2015 report, is to provide a national "snapshot" of SNAP-Ed programs implemented through the LGU system.

[b] For more information on the CNE Logic Model, see https://nifa.usda.gov/resource/community-nutrition-education-cne-logic-model

Key Findings

SNAP-Ed provided through LGUs continues to make significant contributions to meeting federal goals for the SNAP program. The unique three-component structure of LGUs comprised of research, education, and Extension, provides:

- The academic rigor required to develop evidence-based programs that can affect meaningful change on key nutrition, health, and physical activity goals
- Incorporation of best-practices in education and communication to enable SNAP-eligible populations to absorb new knowledge and effect positive change in their behaviors
- Through Extension, delivery of SNAP-Ed programming and content at a local level, reaching SNAP-eligible individuals in their communities and providing information and resources that are a best fit to local needs and circumstances

The report contains detailed discussion of SNAP-Ed inputs, outputs, and outcomes – providing a structured overview of the multi-faceted benefits being delivered. Some key findings include:

Inputs and Providers

- In FY2019, FNS allocated $433 million for SNAP-Ed. At LGUs, federal funding comprised 98.3 percent of LGU budgets for SNAP-Ed activities.
- LGUs are able to draw upon and integrate information from a broad range of resources to develop evidence-based programming that is responsive to state and local needs and characteristics. Resources being used include: federal, state, and local agency data; research studies and reports; surveys; advisory board input; focus groups; community input meetings; and one-on-one interviews.
- Survey respondent LGUs average 57 full-time equivalent personnel allocated to SNAP-Ed program activities. The universities also intensively train and leverage volunteers to maximize delivery capacity in each state. On average, the cumulative hours provided by volunteers equate to an additional 31 FTE personnel extending LGU SNAP-Ed programming.
- LGUs form an important hub and evidence-based program resource for a collaborative network of partnering delivery organizations that are able to use SNAP-Ed programming with a diverse group of audiences. Relationships are maintained with state agencies, associations, education providers (K-12 and higher education), food banks, nonprofits, and many other organizational types.
- LGUs leverage their pedagogy skills for the development of best-practice educational programs and materials, and successful programs are shared nationwide by peer institutions – effectively leveraging the innovative and successful work of individual institutions to benefit multiple states.

Outputs

- LGUs responding to the survey provided direct education programming to an average of 47,244 individuals in each state in FY2019.
- Schools and childcare locations are the most frequently used locations for the delivery of direct education programs to SNAP-eligible individuals. Overall, however, 28 different categories of

delivery sites are reported as being used by LGUs to deliver SNAP-Ed programming, including locations where people eat, learn, live, play, shop, and work.

- Social marketing and mass media are increasingly being leveraged to maximize the reach and build awareness of LGU SNAP-Ed programming. Surveys completed by LGUs in 23 states show these programs reached a combined 27.6 million impressions for FY2019.
- The PSE approach is being widely adopted, and successful evaluated programs are being transferred between participating LGUs. An example of this in action is the Smarter Lunchrooms Movement (SLM). In FY2019, survey respondents reported SLM as the most widely used and shared PSE strategy. SLM uses "nudge theory," a proven concept from behavioral economics, that uses positive reinforcement and indirect suggestions to positively influence SNAP target population behavior in school lunchroom settings.

Outcomes

- Survey respondents indicated that over 6,000 PSE changes focused on nutrition were implemented across 2,400 sites, with an estimated reach of nearly three million people. A further 1,700 PSE changes related to physical activity were reported.
- Direct education activities show consistent improvement in 30 to 50 percent of participants in outcomes across the four domains, including items like decreased consumption of sugar-sweetened beverages (45 percent improvement out of 60,000 youth participants), shopping with a list (42 percent improvement out of 20,000 adult participants), and increased physical activity and leisure sport (36 percent improvement out of 54,000 youth participants).
- Survey responses indicate strong data collection of priority outcomes as outlined by the FY2019 SNAP-Ed Plan Guidance document. While implementation of SNAP-Ed programming and measurement of results vary across the country, data provided by respondents suggest LGU SNAP-Ed providers are working to effectively track the success of their efforts.
- Response rates were highest for short- and medium-term outcomes. Strong data collection in direct education establishes the importance of such initiatives in the lives of individuals, but there is room for improvement in the assessment of long-term effects and the associated population-level changes resulting from continued program implementation, especially with regard to the impact of PSE interventions.

Conclusion

Land-grant university SNAP-Ed activities continue to generate substantial impacts across the states, counties, and communities that comprise the United States. LGUs are developing, deploying, and leveraging diverse, evidence-based approaches to provide education to SNAP-eligible populations that helps them make informed, healthy choices in the use of their SNAP dollars and to generally improve their health and quality of life. Furthermore, SNAP-Ed is an improving and evolving system, integrating new best-practice methodologies, such as PSE, to enhance its positive outcomes.

This fifth report on the SNAP-Ed activities of LGUs is particularly timely, coming at a point when the COVID-19 pandemic and its impacts on the economy have hit the nation and individual families hard. With an expanding population facing economic challenges, the work of SNAP-Ed – informing behaviors that improve individual health and optimizing use of SNAP benefits nutrition – is as important as it has

ever been. Evidence shows SNAP having a strong positive return for the nation, and SNAP-Ed provided through land-grant universities is found to be a highly important contributor to achieving that return.

I. Introduction

A. Supplemental Nutrition Assistance Program

The Supplemental Nutrition Assistance Program (SNAP) is a federal nutrition program that expands food access to millions of low-income Americans. Administered by the U.S. Department of Agriculture (USDA) through the Food and Nutrition Service (FNS), SNAP provides monetary assistance to people in need to reduce hunger and improve dietary quality. As the largest program designed to fight hunger in the U.S.,[1] SNAP is targeted at the most at-risk citizens and is a vital resource in keeping households above the poverty line.

Though nearly half of SNAP participants are children,[1] the program is also designed to assist households with elderly members and members with disabilities. Households with a total income of 130 percent of the federal poverty line or less are eligible, with size of household and employment status determining the total amount received per household. In fact, most SNAP participants that are capable of working hold jobs.[1] The issue is that these are so often low paying jobs, with compensation levels that are unable to lift people out of significant financial challenges and food insecurity.

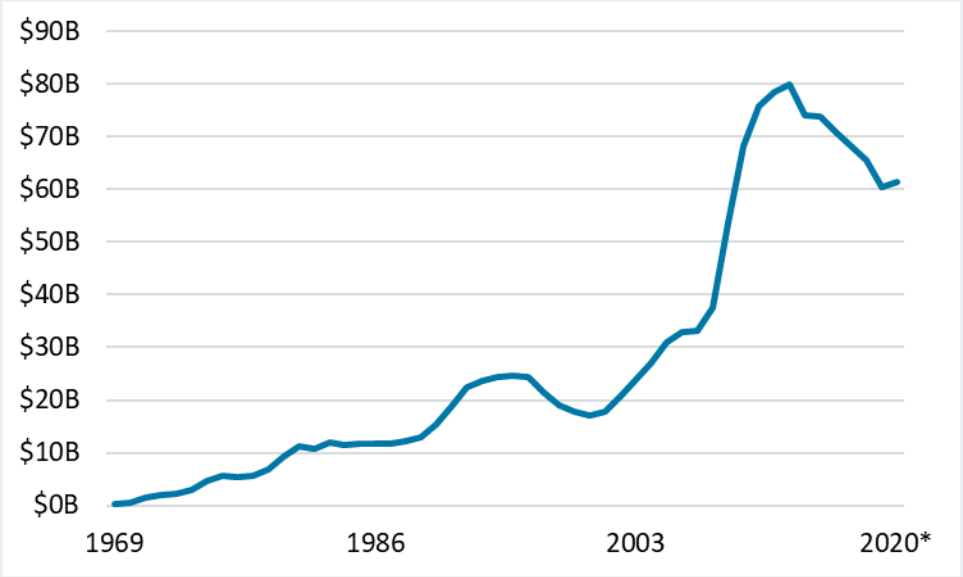
SNAP benefits are distributed on a debit card (EBT) so that participants can use this assistance as payment during retail transactions. EBT cards can be used to purchase nutritious foods and non-alcoholic beverages, but cannot be used for alcohol, tobacco, or other non-food items. Overpayment and underpayment of SNAP benefits in recent years are lower than historical levels,[2] suggesting that abuses of the system are minor and dwarfed by the positive impacts brought to those who need SNAP assistance.

The overall beneficial impacts of SNAP are substantial. The non-partisan Center on Budget and Policy Priorities (CBPP) notes that:

> *SNAP is heavily focused on the poor. About 92 percent of SNAP benefits go to households with incomes at or below the poverty line, and 55 percent go to households at or below half of the poverty line (about $10,390 for a family of three in 2019). Families with the greatest need receive the largest benefits. . . These features make SNAP a powerful anti-poverty tool. A CBPP analysis using the government's Supplemental Poverty Measure (which counts SNAP as income) and correcting for underreporting in government surveys found that SNAP kept 7.3 million people out of poverty in 2016, including 3.3 million children. SNAP lifted 1.9 million children above half of the poverty line in 2016, according to this same analysis — more than any other program.*[2]

SNAP eligibility, participation, and costs peaked as a result of the 2007–2009 recession, with the program growing smaller again as economic recovery continued. Eligibility and participation have fallen since 2013, though the participation rate has increased over the same period. Under FY2019 eligibility guidelines, fewer individuals were eligible for SNAP benefits than when the FY2015 report was written, suggesting SNAP-Ed impacts may have experienced a natural decrease, all else held equal. That said, the economic downturn and unemployment in the first half of 2020, sparked by COVID-19, has resulted in administrative changes introduced to combat these effects. Though not fully reflected in the data yet, SNAP eligibility and participation increased in 2020 (see page 3 for more details).

Figure 1. SNAP Total Program Costs, 1969-2020[3]



**2020 costs are estimated based on the first seven months of the fiscal year.*

In Federal Fiscal Year 2019 (FY2019), the U.S. federal government spent approximately $60 billion on SNAP helping more than 35 million low-income U.S. residents afford the food they need for themselves and their families.[3] These funds are of great importance because research suggests that individuals participating in SNAP benefit in a multitude of ways. While the level of assistance provided to individual recipients is relatively modest, there is evidence that SNAP has widespread positive impacts, including the following:

- Participation in SNAP is associated with household declines in food insecurity.
- Low-income households with SNAP purchase healthier foods.
- SNAP participants self-report having better health than non-participants.
- Adults who received SNAP benefits as children have higher rates of high school completion and lower prevalence of obesity and heart disease.
- SNAP participants spend less on healthcare than non-participants.[4]

These positive outcomes are achieved in part due to expanded access to healthy food, but also because of educational opportunities offered through **SNAP Education** (SNAP-Ed), a program specifically designed to improve participants' nutrition and health.

Utilizing SNAP Flexibility to Provide Essential Relief During the COVID-19 Pandemic[5]

The COVID-19 pandemic has generated widespread negative impacts on the health and economic conditions of low-income households, making food even more difficult to afford for a larger number of people. SNAP was already essential to helping many of these families put food on the table, but SNAP administrators across the country have been able to enact administrative changes to meet the increased need for these key services. This new flexibility helped states to cope with unprecedented growth in their SNAP-eligible populations and meet increased need.

Outlined below are several methods by which USDA has granted flexibility to state SNAP program administrators. These strategies have enabled states to provide greater assistance to struggling Americans while increasing responsiveness through administrative changes.

The Families Coronavirus Response First Act granted states several permissions to facilitate emergency relief efforts, which included the following:

- Allowed for increased benefits to meet immediate rising need through 1) emergency allotment of maximum household benefits and 2) Pandemic EBT (P-EBT) – meal replacement benefits designed to replace lost school meals
- Authorized modifications to application and reporting requirements through use of telephonic application methods, remote review of applications, and the extension or waiving of deadlines and other requirements
- Approved some of the additional waivers by states seeking to use strategies not outlined above

Additionally, some states have created pilot programs for use of SNAP benefits in online retail according to guidelines defined in the 2014 Farm Bill.

In total, emergency benefit allotment was increased by every single state for three to six months, with the vast majority being approved for school meal replacement benefits. Most states also eased application and participation requirements to increase access. At the time of writing, many of these strategies were only temporarily authorized, with USDA set to approve fewer waivers as of September 2020, though continuation of these policies has been encouraged given the long-term nature of economic hardship that is expected to continue.

B. An Overview of SNAP-Ed

1. What is SNAP-Ed?

SNAP-Ed is a federally funded grant program administered by the United States Department of Agriculture's Food and Nutrition Service (FNS) and conducted at the state, county, and local levels. The SNAP-Ed program is oriented around evidence-based nutrition education and obesity prevention for SNAP-eligible populations. SNAP-Ed takes a multi-faceted and multi-level approach to nutrition intervention, addressing health behaviors at both the individual and population levels through education efforts and community public health approaches.

As defined by FNS, the goal of SNAP-Ed is:

> *[t]o improve the likelihood that persons eligible for SNAP will make healthy food choices within a limited budget and choose physically active lifestyles consistent with the current [Dietary Guidelines for Americans] and the USDA food guidance.*[6]

2. History of SNAP-Ed

Formerly known as the Family Nutrition Program and Food Stamp Nutrition Education, SNAP-Ed began in 1988. The land-grant university system (LGUs) played a significant role in the creation and national expansion of SNAP-Ed. Starting with the University of Wisconsin and expanding to universities across the country, LGUs conducted or participated in SNAP-Ed activities in all 50 states by 2004. LGU SNAP-Ed administration has typically been led by Cooperative Extension Systems (CES) and sometimes nutrition departments.[7] LGUs also work with other implementing agencies that receive SNAP-Ed funding to extend program reach within their respective states.

The United States Department of Agriculture's National Institute of Food and Agriculture (NIFA) and its predecessor agency became involved with SNAP-Ed in 1999 because of its collaborative relationship with land grant universities and oversight of another federal nutrition education program, the Expanded Food and Nutrition Education Program (EFNEP). NIFA supports FNS and LGU efforts to provide complementary direct education, multi-level interventions, and community and public health approaches to improve nutrition.[7] While state-level entities like LGUs set community goals and conduct local programming efforts, NIFA facilitates cooperation and sharing of across states.

Significant changes to SNAP-Ed resulted from the Healthy, Hunger-Free Kids Act of 2010. Prior to the passage of this bill, SNAP-Ed funding was more heavily concentrated in state and local sources than in federal support. The 2010 Act transformed the program into a formula-funded model, with the federal matching or cost-share requirement eliminated.[6] While a cap on SNAP-Ed funding was also introduced, the use of formula funding provides a stable base within which states receive proportionately similar amounts. Additionally, state providers can still leverage resources and funding provided by non-federal sources.

The 2010 Act also provided stronger guidelines on the methods of intervention, increasing emphasis on evidence-based practices and multi-level interventions. Current SNAP-Ed guidance suggests that states engage in approaches at various organizational and community levels, in addition to a continued focus on individual and group-based education. **Increasingly, federal guidelines highlight the importance of public health approaches and structural intervention, known as policy, systems, and environmental (PSE) change efforts.** Intervention methods and program goals are discussed in detail in the following section.

II. The Focus of SNAP-Ed and its Core Activities

A. Overview

As defined by FNS, the focus of SNAP-Ed can be summarized as the following two items:

> *Implementing strategies or interventions, among other health promotion efforts, to help the SNAP-Ed target audience establish healthy eating habits and a physically active lifestyle [as well as to emphasize] primary prevention of diseases to help the SNAP-Ed target audience that has risk factors for nutrition-related chronic disease, such as obesity, prevent or postpone the onset of disease by establishing healthier eating habits and being more physically active.*[6]

Additionally, FNS has defined six guiding principles of the program, paraphrased as the following:

- SNAP-Ed is designed to serve low-income populations and SNAP-eligible individuals.
- SNAP-Ed programming must include nutrition education and obesity prevention conducted through a variety of educational methods.
- States determine how to best serve the target populations under their jurisdictions.
- SNAP-Ed must use evidence-based methods – multi-level population approaches as well as individual behavior-focused education.
- Target populations are best served when strong coordination and collaboration occur between governments and other stakeholders through public and private channels.
- SNAP-Ed programming is enhanced when the roles and responsibilities of governments, SNAP agencies, and SNAP-Ed providers are clearly established and regularly implemented.[6]

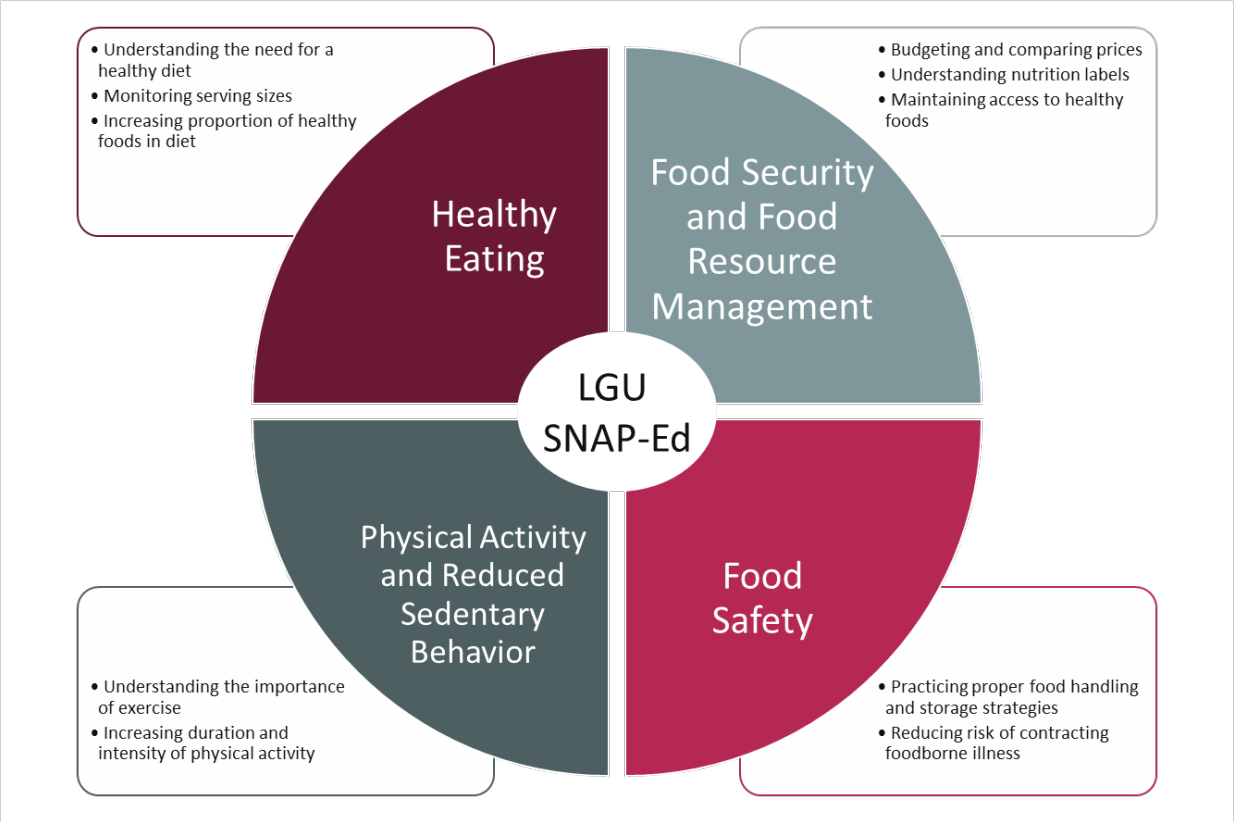
In practice, the combination of the two focal goals and six guiding principles listed above define the purpose, methods, scope, and target populations of interventions used by SNAP-Ed administrators. SNAP-Ed programs utilize a variety of intervention methods and cover a broad set of health-related educational topics, all of which are designed to promote improved well-being and help vulnerable SNAP-eligible populations to improve their quality of life.

B. Key Domains of SNAP-Ed Programming

As noted above, the main goal of SNAP-Ed is to improve health outcomes. SNAP-Ed programs seek to address the health of vulnerable populations through a variety of ways that influence individual decision-making across different environments in which people's lives occur. Planning materials emphasize five key activity and action domains (displayed in Figure 2) that address the areas most critical to achieving the goals of SNAP-Ed:

- **Healthy Eating** – increase consumption of healthy foods and beverages (e.g. fruits, vegetables, water, etc.) and decrease consumption of solid fats and high-sugar foods and beverages
- **Physical Activity and Reduced Sedentary Behavior** – increase physical activity (exercise) levels and reduce sedentary time (i.e. sitting or lying down for long periods)
- **Food Safety** – improve food handling and preparation techniques to prevent foodborne illness
- **Food Resource Management and Food Security** – increase knowledge and use of budgeting, nutrition labels, coupons and sales, and other techniques to maintain a healthy diet using limited financial resources

Figure 2. Primary Activity and Action Domains of LGU SNAP-Ed[c]



1. Healthy Eating

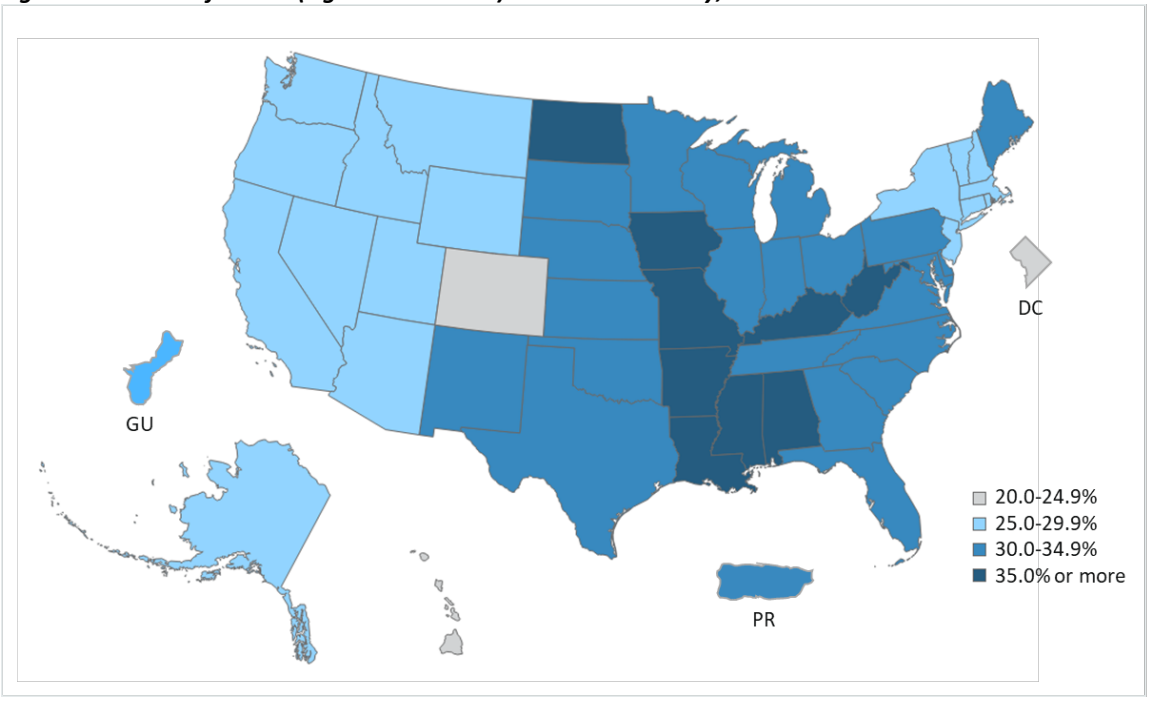
The central component of SNAP-Ed is a focus on nutritional quality and dietary habits, especially to fight obesity and reduce the health risks associated with poor bodily health. Efforts to help individuals and families make more informed choices about the quality and amount of foods in their diet have profound consequences. Inadequate nutrition and excess calories (along with insufficient levels of exercise) continue to increase the rates of overweight and obesity across the U.S. In fact, the U.S. has a lower life expectancy and higher rates of chronic disease burden and obesity than most developed countries.[8] With 36.2 percent of adults having obesity in 2016, the U.S. ranked 1st among developed countries, ahead of Australia (29.0 percent), the United Kingdom (27.8 percent), and France (21.6 percent).[9]

The U.S. Centers for Disease Control and Prevention (CDC) estimate that in 2017–18, 42.4 percent of adults and 18.5 percent of children ages 2-19 had obesity. The burdens of obesity are borne unevenly across the U.S. population. Obesity is strongly linked with both race/ethnicity and socioeconomic status. Black and Hispanic Americans have higher rates of obesity than White and Asian Americans. **Lower income Americans have higher rates of obesity** than their wealthier counterparts, as do less educated people.[10] And because of continuing gaps in socioeconomic status, the likelihood of having obesity and developing associated chronic health problems is compounded for Black and Hispanic Americans, who on average have lower education levels and receive lower incomes than White Americans.

[c] Adapted from a similar graphic featured in the FY2015 LGU SNAP-Ed report also authored by TEConomy, accessed here: https://nifa.usda.gov/snap-ed-lgu-reports

Obesity is a nationwide challenge, as demonstrated in Figure 3. **Across every state, at least 20 percent of the adult population has obesity.** Rates have continued to trend upward since the writing of the FY2015 report, with several states crossing into a higher threshold as defined in Figure 3. The number of states with adult obesity rates greater than 30 percent increased from 22 in 2014 to 32 in 2019.

Figure 3. Percent of Adults (Age 18 and Older) Who Have Obesity, 2019[10]



There are substantial social and economic costs associated with obesity in the U.S. It is well documented that obesity brings heightened risk of chronic diseases such as heart disease, cancer, stroke, and diabetes, which are among the top ten causes of death in the U.S. and in many cases are preventable.[11] In addition to the personal health consequences, obesity brings a substantial financial cost that is imposed on individuals, their families, and state and federal economies. **One study estimated that overweight and obesity cost the U.S. as much as $480.7 billion in direct healthcare costs and over $1.7 trillion total in direct and indirect impacts after factoring in lost economic productivity.**[12] Research also demonstrates that chronic diet-related conditions like obesity, heart disease, and type 2 diabetes increase individual risk of having severe symptoms or dying from COVID-19.[10]

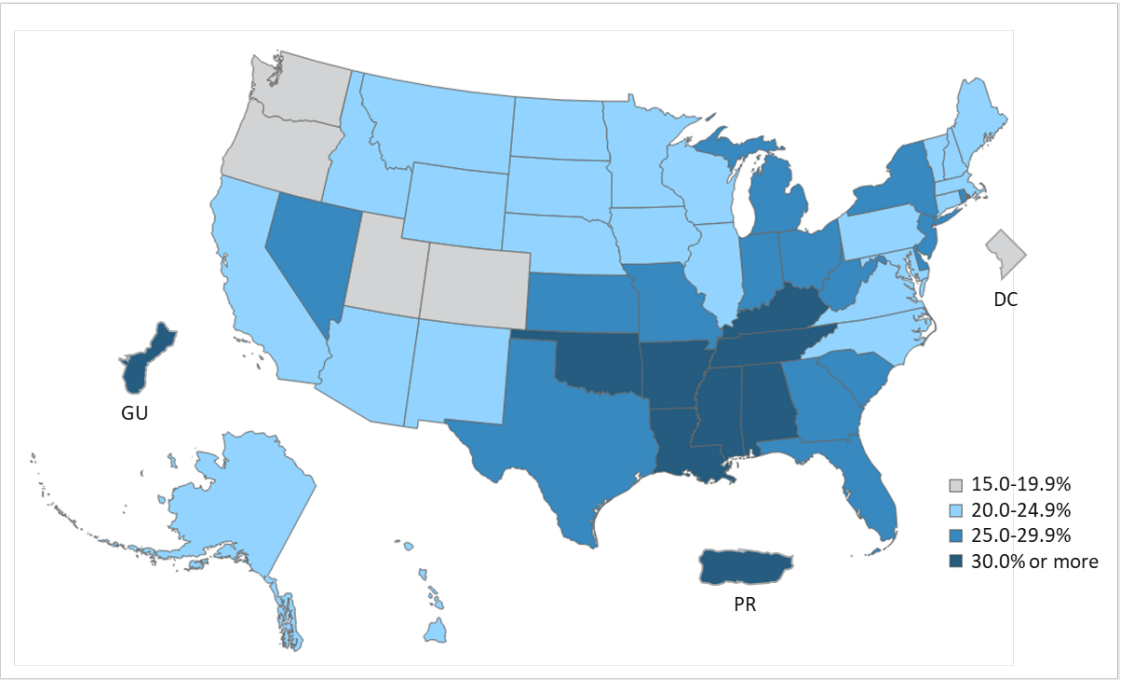
Obesity and chronic disease also carry additional risks when they begin at earlier ages. Children with obesity are more likely to develop chronic conditions like high blood pressure, asthma, joint issues, and mental health problems. Additionally, children with obesity are more likely to have obesity as adults, and their obesity and disease risk factors are more severe as a consequence of early weight gain.[10] Because of the lifelong consequences of obesity, it is especially important that nutrition interventions focus on children who are at-risk or have obesity.

2. Physical Activity and Reduced Sedentary Behavior

While dietary decisions play a major role in the weight gain and chronic disease discussed above, inadequate physical activity has also contributed to these challenges. Low levels of physical activity increase risk of chronic conditions like obesity, heart disease, type 2 diabetes, and some cancers, many of which are among the largest causes of premature death in the U.S.[13]

CDC estimates that only one in four U.S. adults and one in five high school students achieve the minimum recommended physical activity guidelines, with about 31 million adults aged 50 or older having no additional physical activity beyond what is necessary for daily life.[13] In addition to a lack of intense exercise, the modern sedentary lifestyle practice by most Americans carries risks as a result of sitting too often and for too long. Research suggests that extended periods of sitting by people who perform no physical activity can increase the risk of death as much as obesity or cigarette smoking.[14]

Figure 4. Percent of Adults (18 and Older) Who Are Physically Inactive, 2015–2018[15]



Physical inactivity is also a nationwide challenge, though there is more variation than in obesity rates. The map in Figure 4 shows the rate of adults who responded “no” to a question that asked whether they participate in physical activity outside of their jobs. Only four states and the District of Columbia had physical inactivity rates lower than 20 percent, with parts of the Midwest and the South having the highest rates of inactivity.[15]

As noted above with regard to weight, poor health habits that begin in childhood can cause lifelong health problems and can be more difficult to improve at later ages. Indeed, a multitude of research studies find that childhood physical activity levels are correlated with lifetime health outcomes,[16] suggesting programs which seek to increase physical activity levels in children can have the most profound impact on population health. By addressing childhood physical activity and sedentary

behaviors, SNAP-Ed programming seeks to decrease the rates of childhood obesity and chronic disease and set participants on a path to better health for the future.

One of the major challenges that has contributed to decreases in physical activity is the quality of the built environment in which people live, work, and play. Built environments are fully designed by people, historically with little thought to how the features of the surroundings may influence health. Numerous characteristics of built environments have been linked to rates of obesity, chronic disease, physical activity, and a host of other physical and mental health conditions.

Health research has increasingly focused on the ways in which the places where people carry out daily activities either support or inhibit physical activity.[17] The quality of the built environment in which someone works or resides is correlated with socioeconomic status, and individual health is impacted by social and physical determinants of health that define those locations, such as availability of green space and public safety.[18]

While healthy eating and reduced sedentary behavior can each improve health outcomes when the other is not practiced, the combination of improvement in these two areas can have the greatest impact on wellbeing. These two areas comprise the largest number of target outcomes used in evaluation of SNAP-Ed programming.

3. Food Security and Food Resource Management

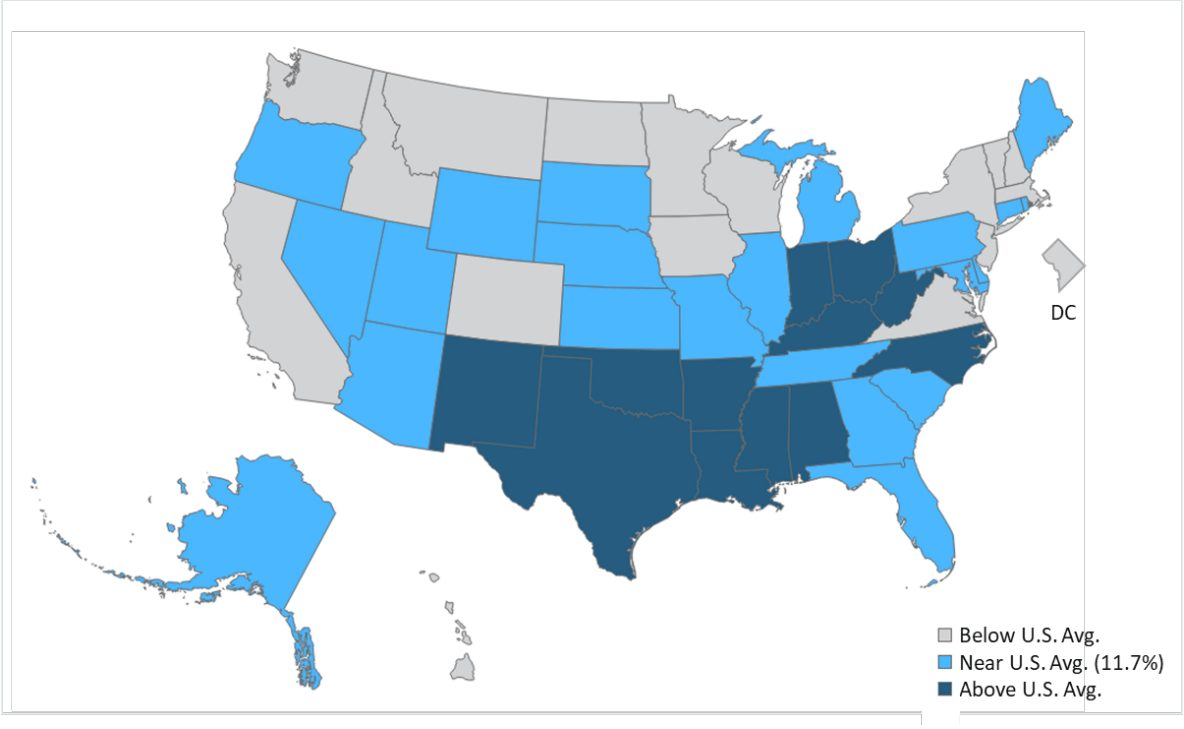
At the population level, access to adequate food is described as food security. USDA defines household food security as having continuing access to enough food for everyone to lead an active and healthy life. Food insecurity is therefore a period where an individual does not have access to safe and nutritionally adequate food, or food cannot be obtained in a socially acceptable way (e.g. stealing). While food security is not a direct measurement of hunger, the conditions which lead to food insecurity likely contribute to hunger.[19]

Food security is a continuum, described as the following four categories:

- **High food security** – consistent access to adequate food
- **Marginal food security** – occasional problems or concerns with access to adequate food, but no substantial reduction in food intake or nutritional quality
- **Low food security** – reduced quality or desirability of food
- **Very low food security** – impeded eating patterns or food intake of at least one household member due to inadequate household resources needed to acquire food[20]

Food (in)security can be a challenge for families based on their income, neighborhood, time constraints, and other resources which inhibit their ability to maintain a reliable amount of food. According to USDA Economic Research Service (ERS), 11.1 percent of U.S. households were food insecure for at least some time during 2018.[20]

Figure 5. Prevalence of Food Insecurity, Average 2016–2018[20]



Like obesity, food insecurity is a nationwide problem (Figure 5). In many counties and across some states, the food insecurity level is similar to or lower than the national average, though there are intrastate regions where county-level insecurity rates are substantially higher than their state's average.[20] **According to ERS, 35.3 percent of households with incomes below the Federal poverty line were food insecure in 2018.**[20] Some groups are disproportionately more likely to be food insecure, including Black and Hispanic households, urban and rural households (as opposed to suburban), and single-parent households. In other words, food insecurity largely impacts vulnerable SNAP-eligible populations.[20]

At the household level, SNAP-Ed programs seek to increase participants' ability to make shopping decisions which are both nutritionally and financially beneficial. Food resource management techniques encourage participants to make healthful shopping decisions, such as using nutrition label information when shopping and buying larger amounts of foods with higher nutritional value like fruits and vegetables. Participants also learn how to stretch their food budgets using techniques like comparing prices, using sales or coupons, and shopping with a list to make sure the household does not run out of healthy food by the end of the month. By leveraging this practical knowledge with SNAP benefits, participant households can hopefully provide adequate nutrition consistently to all family members throughout the year.

4. Food Safety

In addition to the nutritional quality of one's diet, foodborne illness can have profound effects on health. **CDC estimates that 48 million Americans contract a foodborne illness each year, with 128,000 hospitalizations and 3,000 deaths.**[21] NIFA outlines additional consequences that result from these illnesses, including:

- increased health care costs and burdens,
- loss of income,
- decreased labor productivity, and
- decreased consumer confidence.[22]

Most foodborne diseases are infections caused by bacteria, viruses, or parasites like norovirus and salmonella. Because these infections can be particularly devastating to children, older adults, and pregnant women, SNAP-Ed programs emphasize safe food handling and storage practices as part of the shopping and cooking process. In fact, children under five face the highest risk of experience complications from foodborne illness due to less developed immune systems. Young children have higher rates of infection from many pathogens and can face lifelong health consequences after recovering from the illness.[23] It is therefore vital that SNAP-Ed programs reach all members of the family to reduce the likelihood of infection in the more vulnerable groups, especially those who have the extra responsibility of preparing food for other family members.

SNAP-Ed curricula teach participants how to handle, clean, store, and cook foods in ways that prevent the growth or spread of disease and limit personal exposure to these deadly pathogens. From basic hygiene practices like hand washing to proper cooking and storage temperatures, there are several key places in the food preparation process in which participants learn to reduce their risk for illness. Food safety programs also can include information on allergens, emergency preparation, and recently, mitigation of novel coronavirus risk. These practices are also discussed in terms of the home context as well as retail establishments, community or volunteer events, meal delivery, and other environments where unsafe handling may increase risk of foodborne illness.

C. Intervention Strategies

SNAP-Ed activities are divided into three main types based on how they are designed to impact the target population. These three types of programming are direct education (DE); social marketing (SM); and policy, systems, and environmental change (PSE). SNAP-Ed administrators tend to use a combination of these approaches to disseminate information and influence positive behavior change. As noted above, all of these methods are to be conducted using evidence-based practices.

1. Direct Education is best represented by the traditional classroom setting. Participants engage in individual or group instruction whereby they actively engage with the educator or interactive media.

Direct education often occurs through educational curricula selected by administrators in the SNAP-Ed Toolkit. The Toolkit provides program leaders with a standardized set of instructional materials, some developed by federal agencies, but many created by universities or other stakeholders. This enables

providers to utilize ready-made evidence-based approaches rather than designing their own curriculum. These curricula are also defined in terms of the specific outcomes they are intended to seek, audiences they serve, and the structural levels in which they influence change, which facilitates data collection and helps providers to balance their curricula across different areas.

2. Social Marketing is defined by the CDC as "the application of commercial marketing technologies to the analysis, planning, execution, and evaluation of programs designed to influence voluntary behavior of target audiences in order to improve their personal welfare and that of society."[24]

Social marketing strategies are indirect approaches, created to reach the target population in a variety of settings. Social marketing primarily occurs through mass communication methods such as advertising and social media accounts. By utilizing different communication methods and incorporating the participation of various community institutions, social marketing is a broad way to encourage population change.

3. Policy, Systems, and Environmental Change is the most complex but comprehensive of the three types of interventions, combining approaches that aim to change the policies, systems, or environments that affect health. Providers utilizing PSE strategies seek to shape the practices and environments which target populations interact with throughout their lives. This includes changes to physical structures, political supports, and belief systems which govern individual behaviors.

PSE change is used to improve the ways in which institutions and structures influence health and wellbeing in places where people live, work, eat, shop, or otherwise conduct their daily lives. Because of the scope of these institutions, PSE change can reach the largest number of people and remain durable over time. PSE efforts seek to address the ongoing process of environmental influence on population health, modifying individual behavior through higher-level interventions.

For much of SNAP-Ed's existence, direct education was the main method of reaching SNAP-eligible people. However, in recent years an effort has been made to increase the use of PSE change interventions. Because of the macro-level nature of PSE change interventions and the intensive effort required to conduct direct education, PSE change is increasingly considered an especially

effective way to generate health impacts with proportionately smaller resources. At the same time, PSE change can be slower and more difficult to implement because of the large number of disparate institutional and organizational actors involved in policymaking. Additionally, unlike direct education, PSE change can also be difficult to quantify – the process of implementing PSE change is complicated, and the pace and scope of PSE change make impacts more challenging to assess.

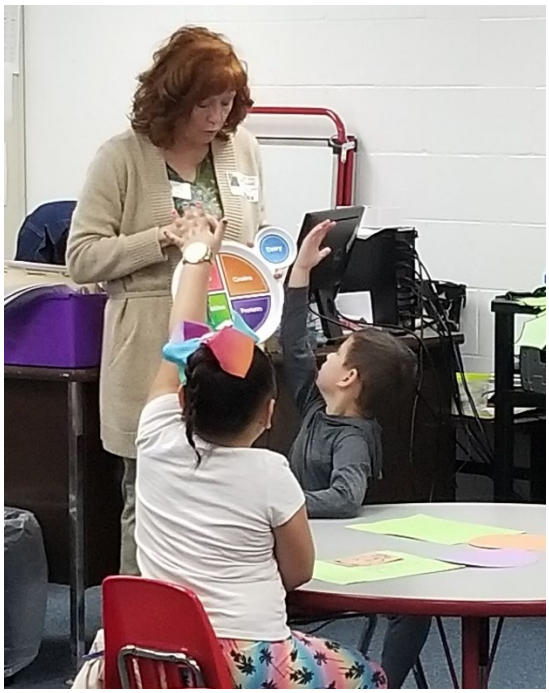
III. The Process of SNAP-Ed

A. Evidence of SNAP-Ed Efficacy

Since the publishing of the last SNAP-Ed review in 2016, dozens of new studies have attempted to assess the impacts and effectiveness of SNAP-Ed programs. While there is not universal agreement on the benefits of each aspect of SNAP-Ed programming, the preponderance of evidence finds support for short-, medium-, and long-term impacts. Though some studies described here assessed SNAP-Ed programs conducted by non-LGU organizations, empirical evidence for the effectiveness of these efforts speaks to the significance of SNAP-Ed programming across the country: even small improvements to health behaviors to thousands of SNAP-eligible populations can compound over time to create substantial reductions in negative health outcomes with wide-ranging impacts.

1. Direct Education

Studies show broad support for the efficacy of direct education programming on increased dietary quality. Research on direct education programs often focuses on either A) within-person change of program participants (evaluated using pre-test/post-test design methods), or B) differences between comparison groups that did and did not participate in such programs.



One study, for example, found that SNAP-Ed participants in Indiana exhibited greater compliance with the Dietary Guidelines of American than their low-income counterparts who did not participate.[25] Another study found that SNAP-eligible Georgian adults with children in the home reported significant increases in measures assessing healthy food consumption and physical activity after attending a weight management program.[26] Other work has also found support for the importance of nutrition curriculum, with adults reporting significantly better health behaviors weeks or months after they attended the sessions.[27, 28]

2. Social Marketing

While the effectiveness of direct education programs can be assessed with surveys of known participants, social marketing strategies are more difficult to study due to the nature in which they are conducted. Research evaluating the impact of social marketing strategies often either A) measures the reach of such campaigns, or B) compares the impacts of these campaigns on groups who experienced differing levels of exposure.

One study found that SNAP-Ed participants exposed to social marketing materials in Ohio expressed significantly higher readiness for increasing vegetable consumption than their counterparts who did not see the materials.[29] Similar results were found in a study of SNAP-eligible adults in Georgia, where those exposed to social marketing campaign messages reported higher willingness to eat more than one fruit or vegetable per day as well as higher consumption than those not exposed.[30] Another study found that 50 percent of SNAP recipients in Louisiana were exposed to at least one social marketing campaign, with people exposed to the material indicating that they gave more thought to adopting healthy behaviors.[31]

3. Policy, Systems, and Environmental Change Efforts

Given the methodological challenges in assessing PSE impacts (described above), it is important to highlight research which has addressed this critical component of SNAP-Ed programming. Research on PSE strategies can take a variety of forms, including A) measuring the reach of PSE efforts, B) assessing the direct impact of these efforts on the population(s) with the greatest exposure, or C) comparing population-level impacts in areas which did or did not experience a PSE change.

Population-level studies arguably offer the most compelling evidence for PSE-related impacts. The purpose of PSE change is to enact broad and stable changes in areas that affect individuals' daily lives. Beneficiaries of positive PSE change may be impacted in ways which cannot be observed at the individual level. For instance, one study found that the impact of PSE on diet quality in California was positively associated with the number of PSE sites: people in neighborhoods with greater numbers of PSE sites showed better average diet quality than their counterparts in neighborhoods with fewer PSE sites.[32] Another study found that the number of PSE sites per census tract was negatively associated with sugar intake among adult caregivers of children in California.[33]

Other research speaks to the importance of PSE implementation and assessment. A study of adult SNAP-Ed participants in several Midwestern states found that perceived availability of healthy food was negatively associated with odds of obesity.[34] This suggests that the way people view the accessibility of food in their neighborhood may have some impact on their decision-making, and efforts designed to improve access to food may reduce one of the barriers to healthy habits. Another study examined SNAP-Ed data collection within California, finding that the system used to collect data on PSE interventions aligned well with federal reporting guidelines. Such a system could be adopted by other states to improve impact assessment of PSE efforts.[35]

B. About This Evaluation

This report is the fifth in a series of reports that have served to document the scope and impacts of SNAP-Ed conducted by LGUs (for Federal Fiscal Years 2002, 2005, 2010, 2015, and 2019). The previous report, also authored by TEConomy Partners, LLC, was published in September 2016 and reported results for Federal Fiscal Year 2015.

Whereas the writing of the FY2015 report required consideration of changes in impacts based on the passage of the Healthy, Hunger-Free Kids Act of 2010, SNAP-Ed implementers surveyed for FY2019 were operating within largely the same system as respondents from FY2015. Indeed, findings presented here generally conform to the same trends, with much smaller changes than were noted in the prior report (between FY2010 and FY2015). As before, this document reports the results of a detailed survey administered to the LGUs engaged in SNAP-Ed. The Community Nutrition Education (CNE) Logic Model was used as the foundation for collecting data for this report, similar to the previous reports generated for the LGU System.[d]

The goal of the FY2019 data collection effort, like that of the FY2015 report, was to provide a national "snapshot" of SNAP-Ed programs implemented through the LGU system. Gathering data on large-scale programs that have impact on diverse communities presents a significant challenge for program evaluators, and in the case of SNAP-Ed, this difficulty is exacerbated by the unique local circumstances that affect each SNAP-Ed community's implementation of educational programs. A wide variety of factors influence the specific educational methods and resulting outcomes for SNAP-Ed programs across the U.S., including demographics, culture, community infrastructure, and availability of healthy foods. These conditions can make consistent comparison of program evaluation metrics difficult, though analyses were carefully conducted with these challenges in mind.

C. Data and Methodology

1. Survey Design

The survey was initially designed and developed for use in earlier reports by representatives from multiple LGUs, working to assure the survey accurately reflected the full range of activities undertaken by implementers. The survey distributed for FY2019 was updated to include some new elements, improve alignment with the Education and Administration Reporting System (EARS) form structure,[e] and account for changes to evaluation standards including adherence to the SNAP-Ed Evaluation Framework.[f] Though changes were made, the overall structure of the survey and the nature of most questions remained the same, maintaining comparability with the prior report. The distribution of the

[d] For more information on the CNE Logic Model, see https://nifa.usda.gov/resource/community-nutrition-education-cne-logic-model

[e] The EARS form is a standardized document used for submission of state-level data to federal agencies. For more information on the EARS form, see https://snaped.fns.usda.gov/program-administration/ears-form-training

[f] For more information on the SNAP-Ed Evaluation Framework, see https://snaped.fns.usda.gov/program-administration/snap-ed-evaluation-framework

survey, data tabulation, analysis and reporting have been performed by the independent research organization TEConomy Partners, LLC.

The FY2019 survey was distributed via email as a PDF form with a mix of open- and close-ended questions regarding both quantitative and qualitative impacts. The major benefit of soliciting open-ended responses to some questions was allowing detailed information to be provided on individual program implementation case studies, where relevant, so that outcomes reporting could benefit from a more narrative structure.

2. Data Collection

The survey instrument was delivered to LGU contacts on February 19, 2020, with data collection continuing through June 30. All additional follow-up with state contacts concluded by September 15, 2020. The instrument was distributed to SNAP-Ed administrators at land-grant institutions that serve as SNAP-Ed implementing agencies, representing 46 states, the District of Columbia, and Guam (henceforth described as states). Responses were received from 43 LGU institutions across 37 states for a response rate of 77 percent of institutions and 75 percent of states (Table 1). Though this is lower than in the FY2015 report, it still represents a majority of states and institutions and therefore gives us a large enough sample size to draw conclusions about program performance and outcomes.

Table 1. Survey Response Rate, FY2002–FY2019

	FY2002	FY2005	FY2010*	FY2015	FY2019
States with LGU SNAP-Ed					
Number of states	49	50	49	49	48
Survey responses	43	42	49	46	37
Response rate	88%	84%	100%	94%	77%
LGUs with SNAP-Ed					
Number of institutions			54	63	56
Survey responses			54	50	42
Response rate			100%	79%	75%

**FY2010 report data were collected from multiple sources. The response rate for the survey portion was 93 percent of institutions.*

There are two factors known to have reduced the number of responses and the response rate compared to that of the FY2015 report. First, there are fewer LGUs that serve as implementing agencies now (56) than in FY2015 (63), as shown in Table 1. Additionally, several institutions indicated that the COVID-19 pandemic prevented them from completing the survey, or in some cases necessitated submission of an incomplete response. The pandemic created difficult structural and programmatic conditions, with SNAP-Ed administrators working remotely while also trying to shift resources to assist with relief efforts. Despite a lower response rate, there is still a sufficient volume of data to conduct the same types of analyses as in previous reports.

Survey responses were aggregated by state: most analyses emphasize state-level planning, programs, and impacts. Of the 48 states with LGUs administering SNAP-Ed, 40 have just one LGU serving that role, while the other eight states each have two LGU implementing agencies. Additionally, some LGUs have decentralized offices that collect data independently of one another. In those cases, respondents were asked to report individually for just their own office, or an individual within the LGU was asked to aggregate their responses before submission where possible. The majority of states that responded had just one response within the state, though in some cases the quantitative findings from multiple LGUs within the same state were combined, or responses were received from a subset of the total LGU offices operating within a given state.

While the overall response rate was good, the total response count for each question varies depending on whether a respondent answered a given item or if that item applied to that respondent. Though most respondents fully completed the survey, the number of states included in analysis of any one question is usually less than the maximum of 37. Each finding is presented with a count of state responses included as an indication of how generalizable a given finding might be.

States were asked to report on their SNAP-Ed activities according to their own interests, concerns, and programming decisions. This report does not directly analyze changes in SNAP-Ed programming that were implemented across states. Rather, analyses presented here reflect overall patterns of change reported among participating states. Comparisons with data from FY2015 are used to demonstrate change in programming or outcomes in the aggregate.

3. Data Analysis

Data were aggregated, cleaned, and analyzed by TEConomy. Survey responses from individual PDF survey forms were combined into a master database for analysis. Some states provided their responses as scanned pages, and some respondents provided supplementary materials such as annual reports or federal data submission documents. When a response was submitted in a format that differed from the intended structure of the survey, the data were integrated appropriately when it was possible to do so. In some cases, information was provided in open-ended text fields that was reformatted or edited to match other data, with quantitative information sometimes extracted from narrative responses. Some respondents were asked to clarify their answers, though some responses were not included in analyses if their meaning was unclear.

Data are presented here in a variety of formats. Percentages, averages, and frequencies were used where possible to summarize quantitative data for presentation of aggregate findings. Qualitative responses were used to identify case studies and vignettes, with further research conducted where applicable to provide examples to explain and give context to quantitative results.

Data analyses were generally conducted to facilitate comparisons with the FY2015 report, with FY2019 findings often presented against their FY2015 counterparts. Due to significant changes in the structure and funding of SNAP-Ed as well as fluctuations in the number of LGUs implementing SNAP-Ed programming, it is not appropriate to draw direct comparisons between FY2019 and FY2010 or earlier years, perhaps with the exception of high-level findings placed into the context of these systemic changes. Because the structure of SNAP-Ed remains much the same since FY2015, change in key impacts can be assessed without introducing many confounding effects.

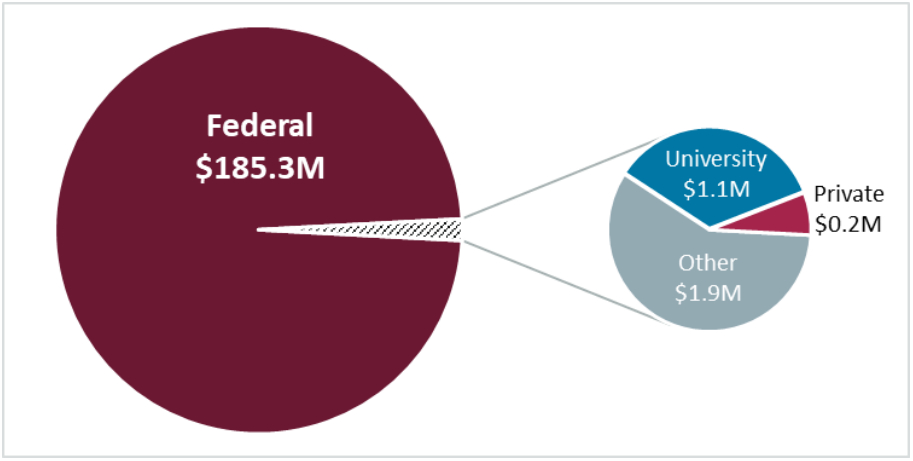
IV. Inputs to the SNAP-Ed System

A. Program Investments

LGUs utilize a variety of inputs to support programming in direct education; social marketing; or policy, systems, and environmental change. Additionally, LGUs utilize local, state, and federal partnerships and resources to tailor programming to the unique circumstances of their communities and states.

In FY2019, FNS allocated $433.0 million for SNAP-Ed[3], $185.3 million of which was distributed to the LGUs that responded to this survey. Total funds reported by survey respondents for FY2019 are shown in (Figure 6). These totals include only approved budgeted funding from federal sources, university contributions, and other public and private funding totaling $188.5 million.

Figure 6. FY2019 LGU SNAP-Ed Program Funding by Source (n = 37 states)



Federal funding continues to comprise nearly all financial resources used to fund budgeted costs. As shown in Table 2, total reported funding decreased slightly from the reported $189.1 million in FY2015. Though the FY2019 totals are lower in part due to a smaller number of respondents, average total funding has increased to $5.1 million in FY2019. A major factor in this increase is the larger pool of federal funding provided to states: although the total value of SNAP benefits has declined by nearly $14

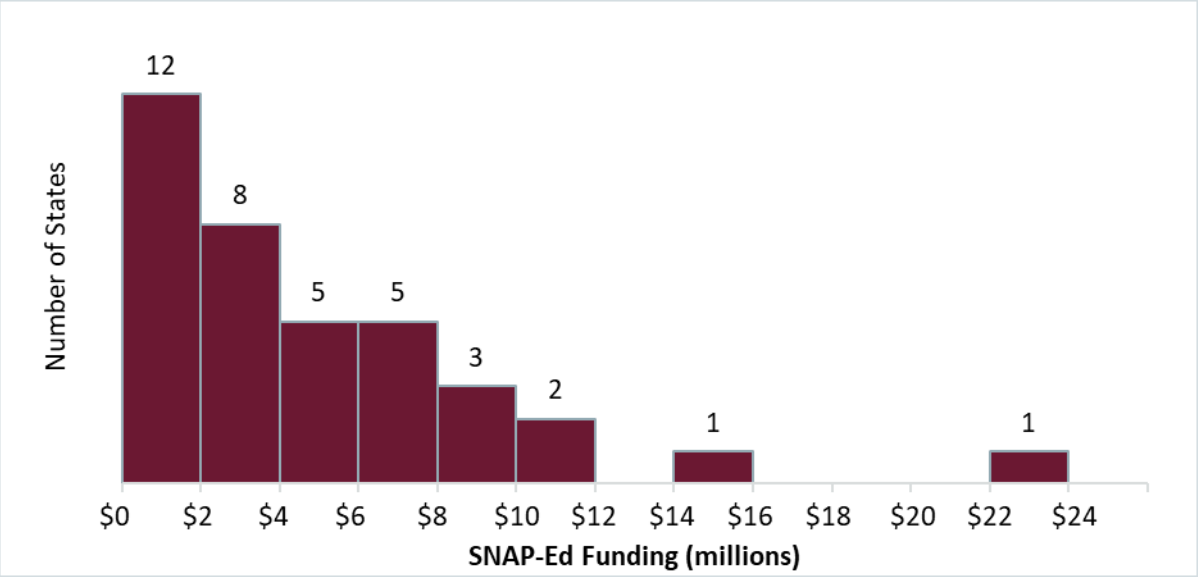
billion (-18 percent) since FY2015, federal SNAP-Ed funding has grown by 6 percent over the same period.[3]

Table 2. SNAP and SNAP-Ed Funding, FY2015 and FY2019

	FY2015	FY2019
Federal Expenditures		
Total Cost of SNAP (billions)	$73.95	$60.36
SNAP-Ed Allocations to States (millions)	$407.00	$433.00
FY2019 LGU Survey Findings		
Survey Responses	46	37
Total Funding Reported (millions)	$189.10	$188.45
Avg. Funding Reported per State (millions)	$4.11	$5.09

Figure 7 shows the distribution of total funds reported by individual states for FY2019. Most states' SNAP-Ed funding totals fall near the mean, but there are some significant outliers. The Pennsylvania State University received the largest SNAP-Ed funding of any survey respondent: $23.4 million in FY2019. As the sole SNAP-Ed implementing agency in the Commonwealth of Pennsylvania, Penn State coordinates programming and distributes funding across the state. This is considerably different to other large population states that usually have multiple implementing agencies working alongside an LGU.

Figure 7. Distribution of SNAP-Ed LGU Program Funds by State (n = 37 states)

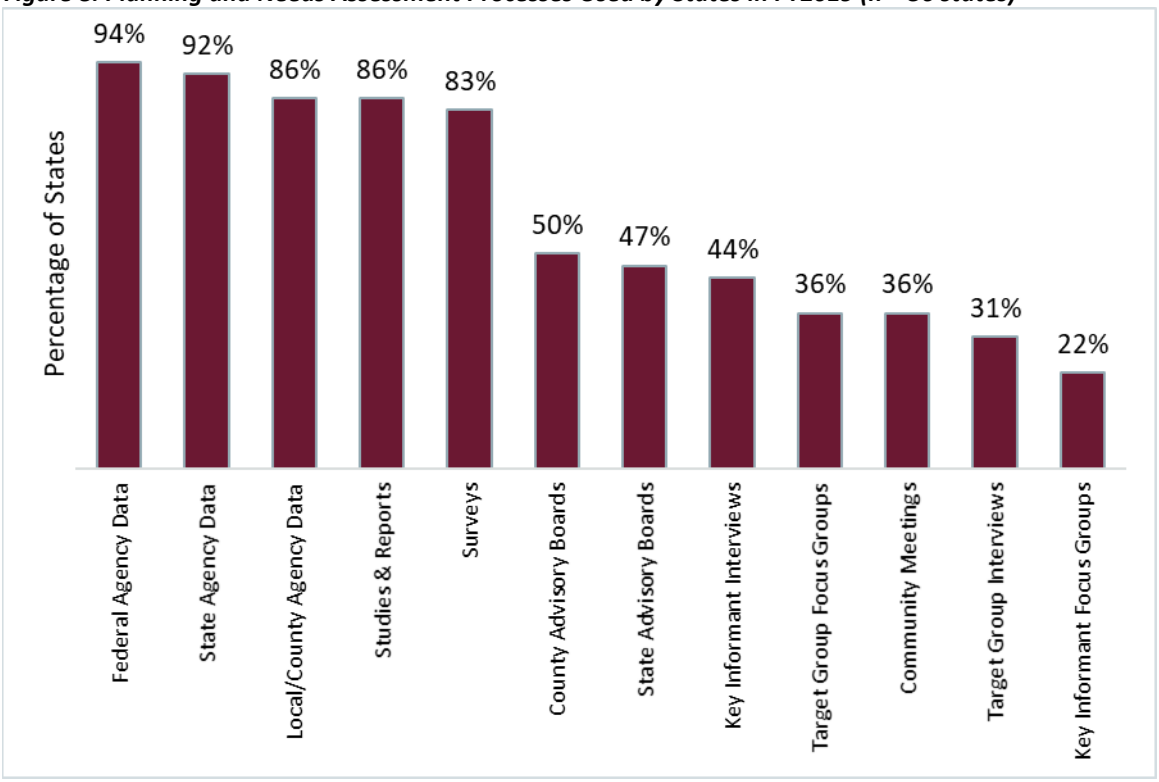


B. SNAP-Ed Planning and Needs Assessment: Customizing Education to the Local Audience

Strong results are likely to come from programs designed to address the needs of local SNAP-eligible populations. These needs and characteristics can vary greatly between states and across communities. Rather than using a standardized approach across the country, LGUs have adopted formal planning and needs assessment processes to customize best-practices and develop evidence-based programs to meet the needs of their individual target audiences.

States were asked to report the various sources of information they used in planning their program implementation for FY2019. Figure 8 shows the percentages of states that reported using each source in planning and needs assessment.

Figure 8. Planning and Needs Assessment Processes Used by States in FY2019 (n = 36 states)



As was the case in FY2015, LGUs relied most heavily on data reported by all levels of government. Customization to local needs is evidenced by the high percentage of respondents (86 percent) using local and county agency data in their planning. The reliance on government data signifies the importance of maintaining high quality databases on the characteristics of SNAP-eligible populations – bespoke program planning that accounts for regional variation can only occur if administrators have adequate information at their disposal.

There is one significant change from FY2015: use of surveys increased substantially as a planning resource, with the percentage of states utilizing surveys increasing from 59 percent in FY2015 to 83 percent in FY2019. Simultaneously, there were smaller yet distinct declines in the use of target group interviews and focus groups. These shifts may signify a change in the methods used to gather information from target populations, with more information collected from standardized surveys and less emphasis on face-to-face methods. However, as Figure 8 demonstrates, many states still utilize interviews, focus groups, and input from government advisory boards to design programming tailored to the needs of local SNAP-eligible populations.

C. Staffing and Collaborations for SNAP-Ed Delivery

1. Employees and Volunteers

Disseminating educational resources requires a strong base of SNAP-Ed staff members and volunteers to reach target populations, deliver educational opportunities, and promote changes in food behaviors and environments. For FY2019, states reported 2,852 total staff (equivalent to 2,035 full time employees, or FTEs) within the LGU system working on SNAP-Ed programs, averaging 57 FTEs per state (Table 3). Adjusting for the difference in response rate, the average reported number of employees has held steady at 79 per state since FY2015. Continuing the shift toward full-time employment observed in the FY2015 report, average FTEs per state increased from 49 in FY2015 to 57 in FY2019.

Key Finding

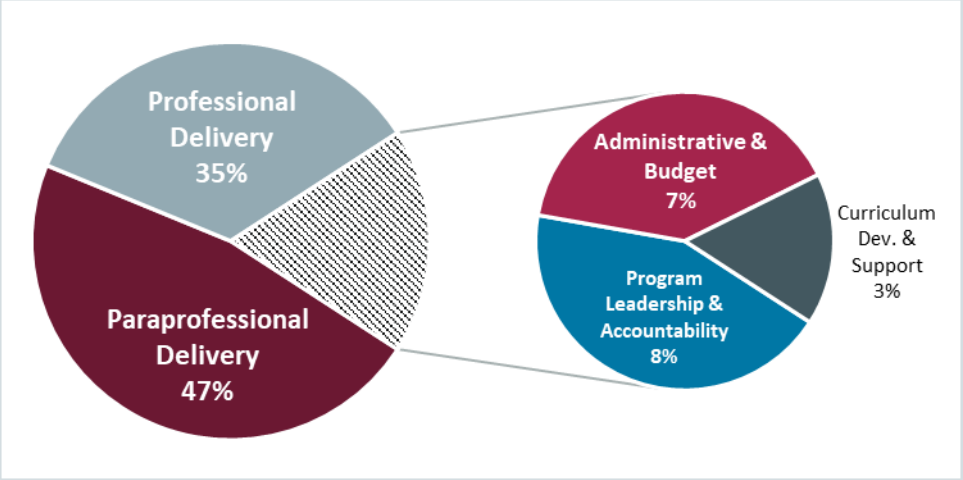
Average number of full-time equivalents per state increased from 49 in FY2015 to 57 in FY2019 (+16%).

Table 3. Comparison of LGU SNAP-Ed Employment, FY2015 and FY2019

	FY2015	FY2019
States Reporting Employment	46	36
Total Employees	3,620	2,852
Employees per State	79	79
Total FTEs	2,269	2,035
FTEs per state	49	57

Figure 9 shows the composition of employment (FTEs) devoted to SNAP-Ed by personnel responsibilities. As was the case in FY2015, program delivery staff comprise the majority of personnel for LGU programs with a continued significant use of paraprofessional delivery staff.

Figure 9. State SNAP-Ed Personnel: Percentage of FTEs by Category, FY2019 (n = 36 states)



Volunteers are also critical to delivery of SNAP-Ed programs where they serve as instructors, as educational support, in advisory roles, or in administrative positions. Volunteer data were provided by 25 states, though each state does not record volunteer information in the same manner. States reported over 100,000 volunteers in FY2019. In some cases, volunteer counts did not adjust for repeat participants – based on the data available for FY2015 and FY2019, the totals presented here likely represent at least 15,000 unique individuals. Reported volunteer hours equated to approximately 31 additional FTEs.[g]

Key Finding

Volunteers are essential to SNAP-Ed delivery, equivalent to about 31 full-time employees.

2. Intra-Institutional Relationships

SNAP-Ed programs partner with a wide variety of organizations, both within and outside the LGU, in order to successfully deliver programming. Though the nature of these relationships is more difficult to quantify than other inputs, the contributions from these organizations are vital to the operations of SNAP-Ed programs.

[g] FTEs calculated for FY2019 are substantially lower than those that were reported for FY2015. Compared to FY2019, the FY2015 data have some significantly outliers that may affect comparability between these reports.

Example Program
Utah State University Extension
Buy Produce for Your Neighbor

In research conducted by Utah SNAP-Ed in 2018, food pantry clients reported limited availability of healthy foods and poor quality of fresh produce as two of the main barriers to making healthy choices in pantry settings. Responding to this identified challenge, *Buy Produce for Your Neighbor* is a PSE strategy piloted by the SNAP-Ed program of Utah State University Extension in 2019. Simple and effective in its approach, the program is essentially a food drive at farmers markets – a program that encourages market patrons to purchase additional produce to donate to the local food pantry. In addition to patron donations, the program has also resulted in farmers market vendors donating their excess produce at the end of their weekly markets. All donated produce is transported to local food pantries by SNAP-Ed educators immediately after each market, stored under refrigeration, and distributed to pantry clients within a few days.

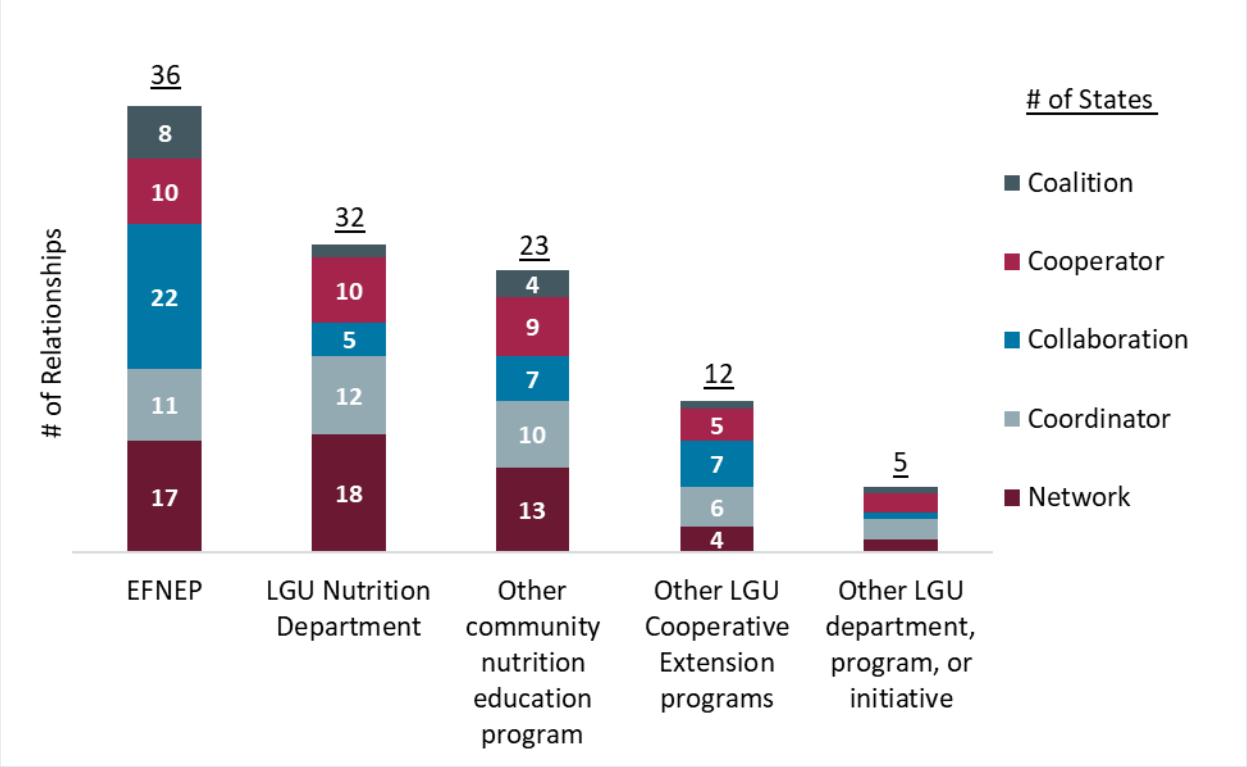
In its first trial, *Buy Produce for Your Neighbor* resulted in over 380 pounds of fresh produce being donated to food pantries. As a result of its successful trial, the program is being expanded to several additional Utah farmers markets for 2020.

As with prior reports, states were asked to report partnerships and define them using the following terminology:

- **Network**: Provides ongoing dialogue and information-sharing
- **Cooperator**: Assists with information, such as referrals and provides space for brochures and access to clients to increase community awareness
- **Coordinator**: Maintains autonomous leadership but shares a focus on issues and group decision-making with an emphasis on sharing resources
- **Coalition**: Shares leadership with defined roles and new resources generated
- **Collaboration**: Maintains a long-term commitment to contribute joint nutrition activities. Consensus decision-making and formal links and role assignments are common

The reported relationships that LGU SNAP-Ed providers have within their institutions or organizations are shown in Figure 10.

Figure 10. Types of Intra-Institutional Relationships (n = 37 states)



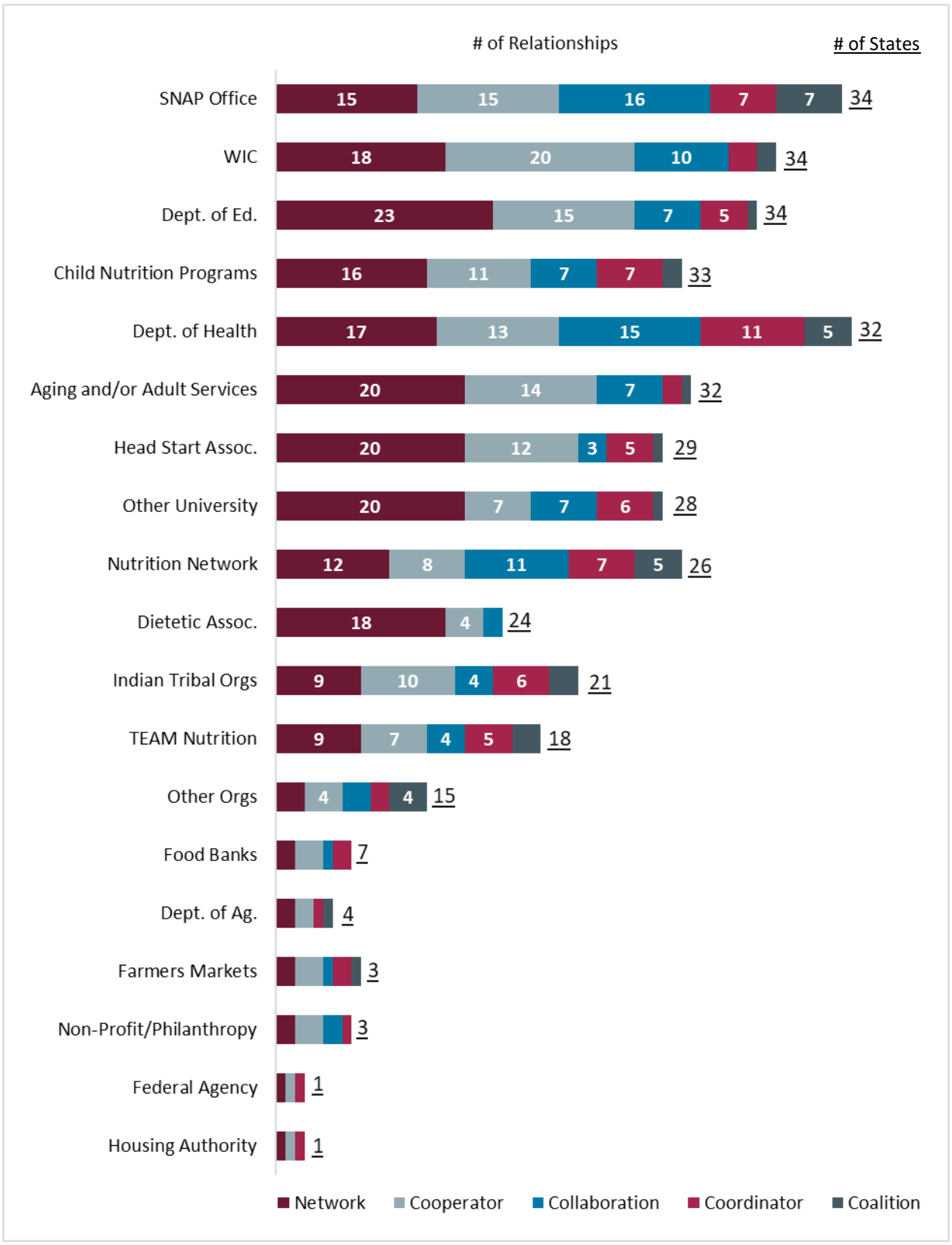
Note: Labels are omitted when the number of relationships represents less than 10 percent of states (<4 states).

All states but one reported relationships within their own institutions with Expanded Food and Nutrition Education Program (EFNEP) offices, a majority of relationships being collaborative. LGU nutrition departments and community education programs took on more of a networking role. Other reported relationships included Cooperative Extension programs, like 4-H, and health-related departments and initiatives.

3. Inter-Institutional Relationships and Other State Partners

Respondents also reported the nature of their relationships with other institutions or state-level agencies with results shown in Figure 11. These findings are similar to the reported relationships in FY2015, with most inter-institutional relationships typically being classified as networking or cooperating.

Figure 11. Types of Inter-Institutional Relationships with State and Other Partners (n = 36 states)



Note: Labels are omitted when the number of relationships represents less than 10 percent of states (<4 states).

Example Program

Ohio State University Extension

Ohio's *Building Capacity for Obesity Prevention* initiative

Building Capacity for Obesity Prevention (*BCOP*) is an example of organizations building partnerships to respond to SNAP-Ed needs and the use of online tools to help communities assess their capacity to implement best practice community nutrition PSEs. Partners in developing the program include Case Western Reserve University's Mary Ann Swetland Center for Environmental Health, The Ohio State University SNAP-Ed program, and The Ohio Department of Health's Creating Healthy Communities Program (CHC).

BCOP's online presence has grown to include over 1,000 toolkits, guides, and other PSE Resources into an online library to help communities in developing their nutrition action plans. *BCOP* also provides an online readiness assessment tool (PSE Readiness Assessment and Decision Instrument – READI) that enables participants to evaluate their current capacity and readiness to implement best practice nutrition improvement programs. The website (https://psereadi.org/) was designed with guidance from SNAP-Ed and public health practitioners in Ohio to promote successful implementation of community nutrition PSE programs. As of September 2020, four Ohio PSE READIs are available through the website for:

- Farmers Markets
- Healthy Food Retail
- Farm to School
- Healthy Eating Policies in Childcare

In addition to the READI assessment tools, the psireadi.org website also provides a significant library of online videos, featuring community nutrition practitioners from across Ohio, that show how different communities have worked to integrate nutrition related PSEs into their communities across the four community nutrition PSE intervention areas.

Most LGU providers (94 percent) reported a relationship with their state SNAP office, 48 percent of which were collaborative. Likewise, 94 percent of providers reported having relationships with their state WIC offices, primarily as cooperators. Over 91 percent of states also reported working with their Departments of Health and Education and Child Nutrition Programs, which illustrates the importance of state-based relationships in developing SNAP-Ed delivery networks. Importantly, a majority of respondents also reported relationships with Indian Tribal Organizations, which assist SNAP-Ed administrators in reaching a key vulnerable population.

Key Finding

Most LGU SNAP-Ed providers report maintaining strong relationships with state SNAP and WIC offices, departments of education, and health departments.

Also important is the domain in which the partnership takes place. SNAP-Ed implementers may choose to work with different partners depending on the target population or the type of site in which the programming occurs. The environmental domain most commonly reported was places to learn (34 percent of relationships), followed by places to live (19 percent) and places to eat (18 percent).

SNAP-Ed and EFNEP: Leveraging Shared Leadership and Programs to Expand Delivery

As noted above, nearly all SNAP-Ed programs surveyed maintain strong relationships with the EFNEP programs that operate within the same institutions. Respondents from 39 institutions provided additional details on the nature of the relationship between SNAP-Ed and EFNEP:

- 76 percent of institutions reported having at least some shared leadership between the programs.
- Only 24 percent of institutions reported that these programs are conducted entirely separately, with the rest having at least some coordinated programming.

These findings suggest that SNAP-Ed and EFNEP administrators aim to maximize the impact of these programs by leveraging shared goals and resources.

D. Development of Educational Materials

SNAP-Ed implementing agencies share access to a list of interventions located in the SNAP-Ed Toolkit.[h] These curricula are offered as pre-packaged programs that SNAP-Ed administrators can use in their educational efforts, with planning and evaluation materials designed for easy use. While some of these interventions were designed by federal agencies, many were devised by SNAP-Ed implementing agencies, including LGUs. Organizations may also create their own programming or use other curricula that are not widely disseminated.

[h] For more information on the SNAP-Ed Toolkit, see https://snapedtoolkit.org/interventions/list-of-interventions/

Respondents report using over 130 different curricula in FY2019. Specific curricula resources vary among states as they seek to tailor programming to meet specific community needs. One key place for modification is in language usage: 25 states reported having at least one program conducted in Spanish, with four of those states also offering programming in at least one additional language.

Table 4. Most Popular Educational Materials Used by States (n = 36 states)

Educational Program	# of States	% of States
Eating Smart • Being Active	14	38.9%
Coordinated Approach to Child Health, CATCH®	13	36.1%
Faithful Families/Eating Smart and Moving More	12	33.3%
Cooking Matters	12	33.3%
Cooking Matters at the Store	12	33.3%
Show Me Nutrition	10	27.8%
Eat Smart Live Strong	7	19.4%
Color Me Healthy	7	19.4%
Go NAPSACC	6	16.7%
Teen Cuisine	6	16.7%
Seniors Eating Well	5	13.9%
Kids in the Kitchen	5	13.9%
MyPlate for My Family	5	13.9%

Table 4 shows the most popular curricula used by states in FY2019. Compared to FY2015, respondents reported using a wider variety of educational programs. In FY2019, 16 different curricula were utilized by more than 10 percent of respondents, compared with only 10 in FY2015. While no curriculum was used by a majority of SNAP-Ed programs, 38 different curricula were reported as being used by multiple states in FY2019. Every institutional respondent listed at least one educational program from outside the SNAP-Ed Toolkit, which indicates that SNAP-Ed implementers continue to use audience-tuned/localized educational materials.

Key Finding

SNAP-Ed impacts populations across the entire lifespan – from preschool to senior citizens.

Educational curricula used by LGU SNAP-Ed programs have been developed by a variety of sources. More than 94 percent of states reported that they offered at least one curricula each targeted at youth aged five to 17, adults aged 18 to 59, and seniors aged 60 and older, while only 60 percent of states offered programming for preschool aged children. Of the more than 360 programs offered across 35 states, 35 percent were delivered to youth, followed by 31 percent to adults, 22 percent to seniors, and 12 percent to preschoolers. The average state provided four curricula for children ages five to 17, three curricula to adults, and two curricula each to preschool aged children and seniors (Table 5).

Table 5. Educational Curricula by Age Group (n = 35 states)

Age Range	# of Diff. Curricula	# States	% of States	Avg. per State
Younger than 5 years	27	21	60.0%	2.0
5 to 17 years old	62	33	94.3%	3.5
18 to 59 years old	49	34	97.1%	3.3
60 years or older	11	14	40.0%	1.6

Table 6 shows the origins of educational materials, displayed as the percentage of states using at least one program from each source. Most states (93.5 percent) use programming developed by a university, either within their own institution or from another. Smaller proportions of states use materials from non-profits (48.4 percent), federal agencies (32.3 percent), the private sector (22.6 percent), and other national organizations (16.1 percent). Though the use of federally designed materials continues to decline in favor of programs designed by other institutions, it is important to note that the Dietary Guidelines for Americans (developed by USDA and the Department of Health and Human Services) and MyPlate (developed by the USDA Center for Nutrition Policy and Promotion) are broadly used as the foundation for SNAP-Ed nutrition education content.[36]

Table 6. Percentage of States Using at Least One Program from Each Source (n = 31 states)

Source of Program	# of States	% of States
University	29	93.5%
Non-Profit	15	48.4%
Federal	10	32.3%
Private Sector	7	22.6%
National Organization	5	16.1%

V. Actions and Impacts

A. Program Actions (Outputs)

In order to derive a high-level picture of the scope of SNAP-Ed participation for FY2019, survey respondents were asked to quantify levels of direct and indirect program actions and policy, systems, and environmental approaches to provide examples of community engagement and sector influence, where indicated. Direct and indirect actions are defined by the setting where educational interventions are deployed to impact nutrition behaviors:

- Direct activities include sessions where participants actively engage in the learning process with educational staff or media.
- Indirect activities are those where audiences are recipients of mass distribution or communication of relevant information and resources without explicit interactive instruction being delivered.
- Policy, systems, and environmental (PSE) approaches are efforts conducted by SNAP-Ed programs continually working to modify societal sectors of influence, improving the characteristics of places in which people eat, live, learn, work, play, and shop for food.

While the FY2019 SNAP-Ed Guidance notes that it is often difficult, if not impossible, to quantify the relative contributions of SNAP-Ed in achieving these PSE-related societal goals, expanded programming targeting these sectors of influence has demonstrated positive changes in health outcomes. Outputs and resulting outcomes are discussed in more detail through the case study examples highlighted in the outcomes section of this report.

1. Direct Education

a. Number of Participants

Table 7 shows that in FY2019, LGU SNAP-Ed providers reported that 1.7 million participants were reached through direct education, of which approximately 1.5 million (87 percent) were SNAP-eligible.[i] The average number of participants per state declined from 54,000 in FY2015 to 47,000 in FY2019. However, the average number of SNAP-eligible participants per state increased from 39,000 to 41,000 over the same period. While the changes are small, this evidence suggests that LGU SNAP-Ed programs may be continuing the trend of narrowing focus to SNAP-eligible populations that was noted in the FY2015 report.

Some program participants are counted as "contacts" rather than as unique individuals. For example, if ten individuals participated in a six-series class, the number of contacts would total 60. Because individuals can be counted multiple times, the number of contacts for a given program should be higher than the number of participants. There were 1.6 million direct education contacts made with SNAP-Ed participants through programs that counted contacts instead of, or in addition to, individuals. The number of contacts reported for FY2019 is significantly lower than that of FY2015, due in large part to the substantially

Key Finding

Direct education programs served at least 1.7 million participants in FY2019, most of whom were SNAP-eligible.

[i] The 1.7 million total participants reached through direct education is a conservative estimate of the total reach of SNAP-Ed programming, as it does not include participant numbers from 3 institutions which did not provide information on these statistics nor from states that did not submit responses.

decreased proportion of states reporting participation counts as contacts. This may indicate that LGUs are more actively working to capture direct education engagement on an individual basis.

Table 7. LGU SNAP-Ed Participants, FY2015 and FY2019

	FY2015	FY2019
States Reporting	46	36
Total Participants	2.5 million	1.7 million
Participants per State	54,348	47,244
SNAP-Eligible Participants	1.8 million	1.5 million
SNAP-Eligible Participants per State	39,130	41,007

Demographic information on direct education participants is shown in Table 8. Direct education programs draw a diverse group of participants, with proportionately greater representation of Hispanic, African American, and American Indian people than the general populace. This finding suggests that SNAP-Ed is successful in targeting vulnerable communities, in which people of color are more likely to reside than White Americans. Additionally, 56 percent of direct education participants are women, which reflects the programmatic focus on pregnant women and mothers as caregivers.

Table 8. FY2019 LGU SNAP-Ed Participants by Age, Gender, Ethnicity, and Race[37]

	Participants	U.S. Population	U.S. Pop. Below Poverty Line
Total People	1,676,813	326,687,501	41,852,315
Age Grouping			
Less than 5 years	7.5%	6.0%	9.0%
5 to 17 years	60.4%	16.4%	22.1%
18 to 59 years	23.2%	55.3%	52.1%
Greater than 60 years	8.9%	22.2%	16.9%
Gender			
Female	55.9%	50.8%	44.3%
Male	44.1%	49.2%	55.7%
Ethnicity			
Hispanic	30.7%	18.3%	26.3%
Not Hispanic	69.3%	81.7%	73.7%
Race			
American Indian or Alaska Native	3.4%	0.9%	1.6%
Asian	2.0%	5.6%	4.5%
Black or African American	21.8%	12.7%	21.7%
Native Hawaiian or Other Pacific Islander	0.6%	0.2%	0.3%
White	71.0%	72.2%	60.3%
Other or Multiracial	1.1%	8.4%	11.7%

b. Delivery Sites

Direct education delivery sites were reported by states using categories consistent with the EARS form. A total of more than 25,000 different delivery sites were reported by 36 states. Detailed information on direct education delivery sites is shown in Table 9.

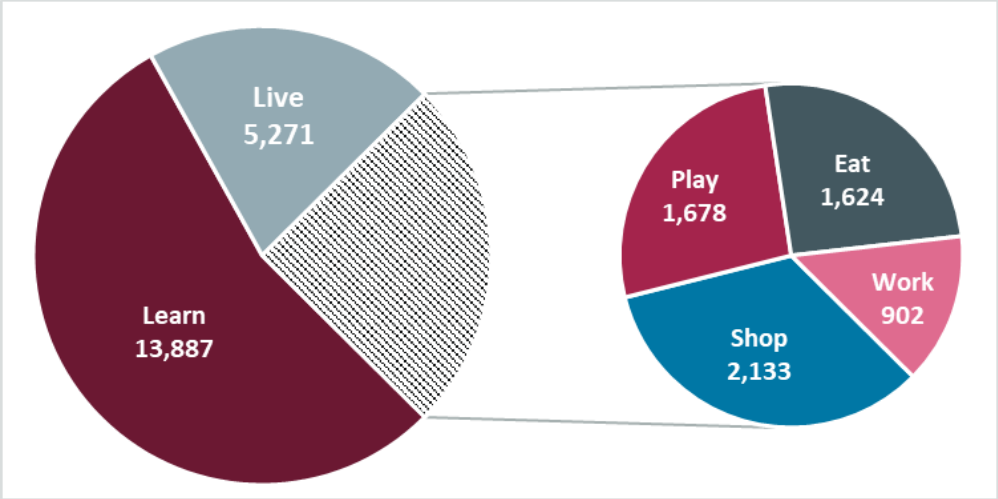
In Figure 12, the count of delivery sites is broken down by the environmental settings domain that each location is classified into according to the EARS form. The majority of sites are places of learning (54.8 percent). As might be expected, the most common places of learning used as delivery sites are schools (K-12, elementary, middle, and high), early care and education facilities (e.g. child care centers, pre-K, etc.), and before- and after-school programs. The prevalence of these sites highlights the emphasis placed on youth education.

Table 9. Direct Education Delivery Sites (n = 36)

Doman/Site	# Sites	# States	Avg. (n = 36)
Eat	1,624	34	45
Congregate meal sites/senior nutrition centers	964	29	27
USDA Summer meals sites	579	26	16
Learn	13,887	36	386
Schools	7,195	35	200
Early care and education facilities	3,211	32	89
Before- and after-school programs	1,211	34	34
Family resource centers	610	30	17
Libraries	584	30	16
Extension offices	466	27	13
WIC clinics	276	23	8
Colleges and universities	139	21	4
Live	5,271	35	146
Individual homes or public housing sites	1,704	31	47
Faith-based centers/places of worship	708	30	20
Emergency shelters and temporary housing sites	638	27	18
Health care clinics and hospitals	604	34	17
Group living arrangements/residential treatment centers	587	27	16
Indian reservations	49	18	1
Other	981	12	27
Play	1,678	35	47
Community and recreation centers	1,080	33	30
Parks and open spaces	403	23	11
Gardens (community/school)	103	20	3
State/county fairgrounds	60	13	2
Shop	2,133	33	59
Food assistance sites, food banks, and food pantries	1,368	31	38
Farmers markets	486	29	14
Small food stores (≤3 registers)	146	13	4
Large food stores and retailers (4+ registers)	108	17	3
Work	902	33	25
Adult education, job training, TANF, and veteran services	616	31	17
SNAP offices	164	19	5
Worksites with low-wage workers	98	18	3
Grand Total	25,332	36	704

Note: Location types that were reported on average less than once per state were omitted from the table.

Figure 12. Direct Education Delivery Sites by Environmental Settings Domain (n = 36)



Places where people live comprise 20.8 percent of sites reported, with the most common being individual homes and public housing sites. Places where people shop were 8.4 percent of reported sites, led by food assistance sites, food banks, and food pantries.

On average, states reported utilizing 704 sites. Together, these site totals reflect a wide variety of locations where SNAP-Ed programs are delivered.

Key Finding

Schools and childcare centers are the most utilized locations for direct education programs.

c. Social Marketing

Social marketing activity in FY2019 was reported by 26 states. Details on specific campaigns were reported by 15 states; states that provided detail on specific efforts operated a total of 24 unique campaigns, averaging 1.6 campaigns per state. If the states that did not report details on the specific number followed similar trends, it is estimated that LGU SNAP-Ed programs operated roughly 40 social marketing campaigns in FY2019.

States were asked to report the methods by which they distributed information through social marketing (Table 10). With 23 states reporting, respondents estimate that the various approaches to social marketing reached a combined 27.6 million impressions. Nutrition

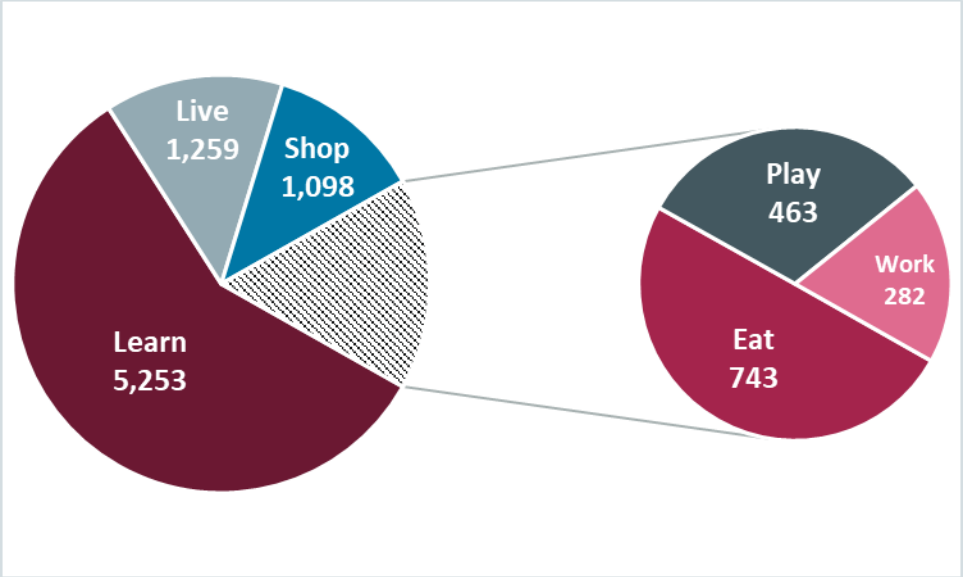
education reinforcement items and other hard copy materials reached generated substantially larger volumes of impressions than most other methods. However, these methods also tend to require the largest count of distributed items. The use of online methods is especially important – with the relatively low cost of posting items to publicly available sites web pages, these may be both the most effective and efficient methods by which participants can be reached. Billboards and other signage also reached large populations with a relatively small number of items distributed.

Table 10. Social Marketing Items and Potential Reach (n = 23)

Social Marketing Delivery Method	Number of Unique Items Distributed	Total Items Distributed	Est. Target Population Reached
Nutrition education reinforcement items	23,193	7,214,024	5,516,360
Billboards, bus/van wraps, or other signage	124	573	5,082,730
Hard copy materials	16,148	6,268,051	4,810,905
Social media	15,562	1,107,541	4,255,137
Other	23,959	4,882,468	3,018,076
Electronic materials	238	236,818	2,208,586
Articles	778	291,107	885,760
Point-of-sale or distribution signage	772	44,237	458,703
Radio	85	85	453,586
Websites	287	287	448,738
Calendars	39	42,756	207,827
Videos	326	326	123,933
TV	11	11	100,600

Detailed information on the locations targeted in social marketing campaigns was provided by 16 states. In Figure 13, social marketing sites are broken down by the environmental setting domains in which these locations are classified. Places where people learn comprised 57.7 percent of social marketing sites, with places where people live (13.8 percent) and shop (12.1 percent) following behind. The overall distribution of sites is similar to that of direct education, with the strongest emphasis placed on learning environments.

Figure 13. Social Marketing Sites by Environmental Settings Domain (n = 16)



As shown in Table 11, the most commonly utilized sites include schools (3,083 sites across 14 states) and childcare facilities (1,317 across 12 states).

Table 11. Social Marketing Sites (n = 16)

Domain/Site	# Sites	# States	Avg. (n = 16)
Eat	743	13	46
Congregate meal sites/senior nutrition centers	317	11	20
USDA Summer meals sites	418	9	26
Learn	5,253	15	328
Before- and after-school programs	110	12	7
Early care and education facilities	1,317	12	82
Extension offices	174	10	11
Family resource centers	206	10	13
Libraries	187	11	12
Colleges and universities	18	11	1
Schools (K-12, elementary, middle, and high)	3,083	14	193
WIC clinics	75	10	5
Other	78	7	5
Live	1,259	14	79
Emergency shelters and temporary housing sites	392	9	25
Faith-based centers/places of worship	185	12	12
Group living arrangements/residential treatment centers	161	9	10
Health care clinics and hospitals	166	12	10
Indian reservations	12	4	1
Individual homes or public housing sites	324	12	20
Other	19	3	1
Play	463	14	29
Community and recreation centers	140	13	9
Gardens (community/school)	33	8	2
Parks and open spaces	174	11	11
State/county fairgrounds	106	8	7
Other	10	4	1
Shop	1,098	16	69
Farmers markets	277	15	17
Food assistance sites, food banks, and food pantries	648	13	41
Large food stores and retailers (4+ registers)	21	8	1
Small food stores (≤3 registers)	146	10	9
Work	282	13	18
Adult education, job training, TANF, and veteran services sites	109	11	7
SNAP offices	95	7	6
Worksites with low-wage workers	72	6	5
Grand Total	9,098	16	569

Note: Location types that were reported on average less than once per state were omitted from the table.

Example Program

University of Wisconsin-Extension

The Safe and Healthy Food Pantries Project

Emergency food assistance sites are an important component of the emergency food system for low-income and food insecure populations. However, studies demonstrate that while emergency food assistance organizations are committed to promoting the health of clients, few have formal tactics in place. For this reason, the University of Wisconsin SNAP-Ed team determined that interventions needed to be professionally designed that would support emergency food assistance sites in promoting wellness of clients. The design of interventions specifically targeted policy, systems, and environmental changes – one of three approaches to deliver nutrition messages outlined by the SNAP-Ed guidance – to complement nutrition education in emergency food assistance settings.

The Safe and Heathy Food Pantries Project (SHFPP) was first developed beginning in 2013 as a result of a community and academic partnership with funding provided by the University of Wisconsin–Madison School of Medicine and Public Health Wisconsin Partnership Program. It provides an evidence-based intervention for operators of emergency food assistance sites, enabling them to implement policy, systems, and environmental changes to promote both health and food safety.

With multiple years of SHFPP implemented, an evaluation was undertaken to examine outcomes and impacts generated, and to determine if the program is working towards meeting a key goal of reducing risk of chronic disease among food insecure populations. The evaluation was designed within the SNAP-Ed Evaluation Framework. Some key findings include:

- SNAP-Ed educators worked with emergency food assistances sites and organizations spread across the state of Wisconsin on 60 unique PSE projects between October 2016 and September 2018. Between these 60 projects, 145 individual changes were reported.
- Engagement with SHFPP was found to generate both intended and favorable unintended outcomes. These outcomes are impactful to the behaviors and health of food insecure populations. In pantries that made changes to the physical layout, clients experienced a feeling of dignity and were better able to practice food resource management behaviors. Nutrition education and signs about nutrition were found to influence the clients to make healthier choices.

d. Policy, Systems, and Environmental Change

As noted above, PSE change efforts take many forms, and the characteristics of a given program can be highly contextual. Quantitative analysis of PSE programs is therefore more difficult than for the other intervention strategies because the programs must be designed or adapted to work in consideration of local conditions. The quantitative analyses presented below are supplemented with several vignettes throughout this report. These vignettes highlight unique and successful PSE change initiatives from LGUs around the country.

Key Finding

PSE Change interventions target a variety of sites across each domain, reaching diverse populations across different life stages.

A total of 36 of 37 states reported that they were engaged in or planning at least one PSE change program in FY2019. These survey findings suggest that use of PSE change initiatives is more widespread than social marketing, reflecting the increased importance of PSE change in SNAP-Ed guidelines. Respondents stressed the importance of multi-level and comprehensive interventions, with many states reporting that PSE change strategies were conducted within sites that received simultaneous attention from direct education and/or social marketing programs.

Example Program
University of Illinois Extension
Nutrition Environment Food Pantry Assessment Tool

In Illinois, approximately 11 percent of households experience food insecurity over the course of a typical year. Community food pantries across the state are one of the tools being used to fight the food insecurity challenge. At the University of Illinois, SNAP-Ed programming specialists with Illinois Extension developed the Nutrition Environment Food Pantry Assessment Tool (NEFPAT) which is designed to help food pantries offer healthy food items and educate food pantry customers regarding how to improve their health through better nutrition choices. As noted in a 2020 report on the impact of Illinois Extension:

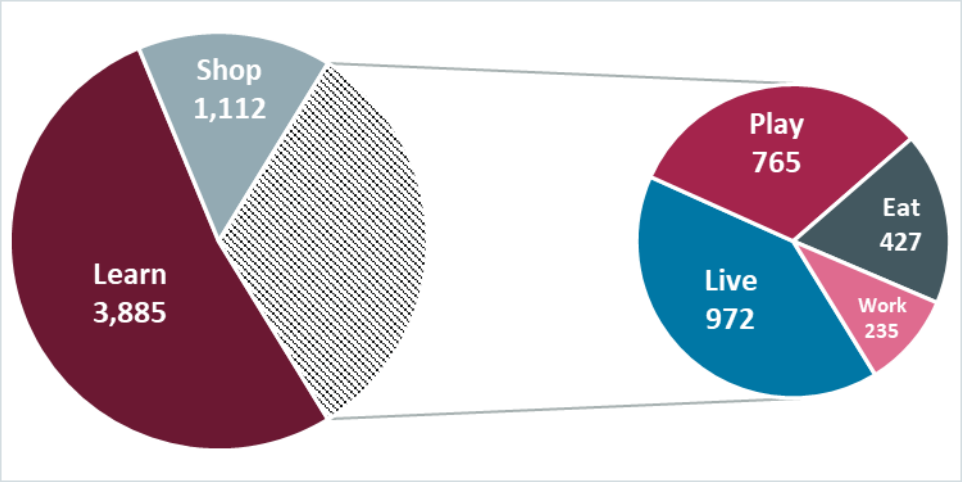
> *Illinois Extension collaborates with pantry personnel to customize intervention plans to help move pantry clients toward healthier food choices. Intervention plans range from adding healthy signage to adopting nutrition policies for purchased/donated foods. Food pantries who adopt suggested practices create a space that makes the healthy choice, the easy choice, and promote dignity and inclusivity. Buy-in and support for NEFPAT and healthy pantry interventions in Illinois is growing. Since 2018, SNAP-Ed has engaged in 92 emergency food partnerships and 20 multisector emergency food coalitions. Four of these coalitions were started by Illinois Extension Educators to strengthen local pantry networks and offer a space for the exchange of ideas, resources, and best practices.*[38]

The report further notes that:

> *Since October 2018, Illinois SNAP-Ed staff have implemented a total of 132 promotional, system, environmental, and policy changes with food pantry partners. In that same time, overall NEFPAT pre-assessment to post-assessment scoring has seen an average increase of 32.8 percent statewide.*[38]

Detailed information on the location of PSE change efforts was provided by 32 states. The number of sites by environmental settings domain is shown in Figure 14. Similar to direct education, places where people learn are the most common domain, representing 52.5 percent of PSE sites. Though the order is different to that of direct education sites, places where people shop (15.0 percent) and places where people live (13.1 percent) follow as the next most utilized domains.

Figure 14. Policy, Systems, and Environmental Change Sites by Environmental Settings Domain (n = 32)



Details on specific sites are provided in Table 12. The sites most commonly targeted in PSE change interventions include schools (2,293 sites), food assistance sites (710 locations), and early care facilities (670 sites). The variety of sites again demonstrates the commitment of LGU SNAP-Ed programs to improving health outcomes in people of diverse backgrounds and across different places where individuals make dietary decisions.

Table 12. Policy, Systems, and Environmental Change Sites (n = 32)

Domain/Site	# Sites	# States	Avg. (n = 32)
Eat	427	21	13
Congregate meal sites/senior nutrition centers	247	16	8
USDA Summer meals sites	157	12	5
Learn	3,885	29	121
Before- and after-school programs	279	19	9
Early care and education facilities	670	18	21
Extension offices	212	16	7
Family resource centers	99	10	3
Libraries	213	13	7
Colleges and universities	48	14	2
Schools (K-12, elementary, middle, and high)	2,293	28	72
WIC clinics	23	8	1
Live	972	24	30
Emergency shelters and temporary housing sites	58	9	2
Faith-based centers/places of worship	138	18	4
Group living arrangements/residential treatment centers	125	13	4
Health care clinics and hospitals	235	12	7
Individual homes or public housing sites	262	14	8
Other	140	10	4
Play	765	26	24
Bicycle and walking paths	40	7	1
Community and recreation centers	286	19	9
Gardens (community/school)	306	18	10
Parks and open spaces	59	10	2
State/county fairgrounds	29	6	1
Other	45	5	1
Shop	1,112	28	35
Farmers markets	320	24	10
Food assistance sites, food banks, and food pantries	710	26	22
Large food stores and retailers (4+ registers)	26	12	1
Small food stores (≤3 registers)	48	13	2
Work	235	11	7
Adult education, job training, TANF, and veteran services sites	73	8	2
SNAP offices	137	5	4
Worksites with low-wage workers	18	5	1
Grand Total	7,396	32	231

Note: Location types that were reported on average less than once per state were omitted from the table.

Smarter Lunchrooms Movement: Nudging Students into Making Healthier Choices[39, 40]

While PSE change strategies can be very local in scope and design, some examples of widely used PSE programs exist. One such program is the Smarter Lunchrooms Movement (SLM). SLM utilizes research-based principles to guide students to choose healthier and more nutritious foods at meals consumed within the school lunchroom.

The program was first implemented in 2010 at Cornell University, with gradual expansion over time. SLM was designed to encourage students to make healthy decisions while still providing students with choices at mealtimes. The solutions utilized by SLM are implemented with little or no cost to the school, with a focus on sustainability for long-term success.

The driving force of SLM is nudge theory, a concept from behavioral economics. Nudge theory suggests that attempts to influence behavioral changes are most effective if positive reinforcement and indirect suggestions are used to guide decision-making. Students are thus given the ability to make their own decisions within a constrained set of choices that "nudge" them toward being healthier.

The six principles of SLM help to illuminate how nudge theory is applied to lunchroom dietary choices. These principles are:

- Manage portion sizes
- Increase convenience
- Improve visibility
- Enhance taste expectations
- Use suggestive selling
- Set smart pricing strategies

In FY2019, SLM was the most commonly used PSE strategy reported by respondents. In fact, with 18 states (48.6 percent) incorporating SLM strategies and principles, use of the program is more widespread than any single direct education curricula (the most frequently reported education curriculum was used by 14 states). Respondents listing SLM among their programs represent every region in the country, which speaks to the universality of its approach.

As a well-tested, ready-made program with strong evidence supporting its efficacy, SLM is a comparatively easy PSE strategy to implement and evaluate. Rigorous testing during the design stage and subsequent empirical research suggest that SLM is indeed a powerful tool for seeking behavioral change that is widely applicable due to the universal nature of school lunchrooms.

B. Program Results (Outcomes)

1. Overview and Response Rate

Outcomes are reported as: short-term, where knowledge is gained and/or skills are developed; medium-term, where behaviors have been adopted; and, long-term, where health, financial, and/or social conditions have changed.

Outcomes are arranged based on multiple criteria as demonstrated in the SNAP-Ed Evaluation Framework.[41] The evaluation tools are designed to account for both the level of intervention (individual, environmental settings, and sectors of influence) and the length of time in which impacts are evident:

- **Short-term impacts (ST)** – the groundwork for new habits is laid, with new skills developed and/or knowledge gained
- **Medium-term impacts (MT)** – new behaviors are adopted, signifying an internalization of the information learned earlier
- **Long-term impacts (LT)** – due to the adoption of new behaviors, there are observable changes in health, financial, and/or social conditions
- **Population results (R)** – population-level assessment of improved diet quality and physical activity levels

Unfortunately, the overall response rate for outcomes is relatively low compared to other portions of the survey. Respondents were asked to provide information for as many of the 48 outcomes as they could, with particular emphasis on the priority outcomes described below. If fewer than three states responded to a given outcome, the data are not presented here. Caution must be used when interpreting results presented from smaller numbers of state respondents, as the findings may not be generalizable.

Additionally, most respondents provided data for only some of the questions contained in each outcome. For some states, a missing response indicates that a component of an outcome is not applicable (i.e. the state does not have the program that would generate this outcome). But for others, the data were unavailable or were simply not provided. These analyses were conducted with this limitation in mind. Percentages and averages were calculated using those states with "complete" responses for each component of an outcome where appropriate.

Counts of responses by outcome category are shown in Table 13. The most robust data for analysis come from the medium-term outcomes, where eight of 13 outcomes had at least three states responding. The quantity of responses here is likely due to the medium-term focus in the priority outcomes below. None of the short-term or long-term outcomes were answered by a majority of states. Population-level outcomes, which are designed to assess broad and stable impacts, were not answered by any states and therefore cannot be included in analyses.

Table 13. Outcomes and Response Rates, FY2019

Outcome Responses	Short	Medium	Long	Population
Responses from 19+ states	-	5	-	-
Responses from 3-18 states	5	3	6	-
Responses from 0-2 states	1	5	12	11
Total outcomes	6	13	18	11

Note: Some outcomes are omitted here because they were addressed in other sections of the survey.

2. Priority Outcomes

The FY2019 SNAP-Ed Plan Guidance document provided a list of priority outcomes that FNS recommends as the most important items for which to collect data.[6] Respondents were asked to provide data for all applicable outcomes in the SNAP-Ed Evaluation Framework, but special emphasis was placed on this priority list. The priority list includes the following outcomes:

- Medium Term 1: Individual Level – Healthy Eating
- Medium Term 2: Individual Level – Food Resource Management
- Medium Term 3: Individual Level – Physical Activity and Reduced Sedentary Behavior
- Medium Term 5: Environmental Settings – Nutrition Supports
- Population Results 2: Fruits and Vegetables

The priority outcomes focus on health behaviors that are central to the mission of SNAP-Ed. Most of these outcomes measure the impact of direct education efforts on participant improvement. The medium-term outcomes related to direct education were generally assessed with a pre-test administered before the intervention and a post-test administered after.

No respondents provided data for any of the outcomes listed under Population Results. The Evaluation Framework recommends these outcomes to be measured using broader survey instruments completed at the national or state level, or comparisons of the target population with a similar control group that received no intervention. For many states, the data collection effort to collect statewide surveys would require coordination beyond what is currently occurring, with a focus on the larger picture. It is unfortunate that no states have reported these data, and this is perhaps the area where more collaborative data collection efforts with federal, state, and local partners would bring the most benefit to understanding program impacts.

Each outcome presented in the following section begins with a summary of that outcome's objectives as defined by the SNAP-Ed Toolkit.[j] A summary of key findings for each outcome is presented along with full data in each respective table.

[j] The SNAP-Ed Toolkit can be accessed here: https://snapedtoolkit.org/framework/index/

MT1: Individual Level – Healthy Eating

Changes in individual and family healthy eating behaviors on the pathway to achieving the current Dietary Guidelines for Americans recommendations.[k]

MT1 (Table 14) pertains to healthy eating habits. Respondents were asked a variety of questions designed to gauge the frequency and amount of fruits and vegetables consumed as well as consumption of water and other beverages. Twenty-four states responded to at least one item in this section, though the number of responses per item ranges from four to 17. Around 40 percent of adult participants indicated improvement in most metrics. While there is more reported variation in the outcomes of youth, respondents generally indicated that 30 to 40 percent of children showed improvement on most measures.

For youth, the highest success rate was reported for frequency of sugar sweetened beverage consumption, with 45 percent of more than 60,000 participants showing improvement. For adults, states reported that 42 percent of participants showed improvement in two areas: consumption of sugar sweetened beverages (out of nearly 18,000 people) and consumption of low-fat or fat-free milk products (of nearly 14,000 participants).

Key Finding

42 percent of adult participants showed improvement in reduced consumption of sugar sweetened beverages and increased consumption of low-fat or fat-free milk products.

With high rates of type 2 diabetes and heart disease in U.S. adults, SNAP-Ed programs serve as one source of potential dietary improvements that reduce risk for these chronic conditions.

MT2: Individual Level – Food Resource Management

Changes in individual and family behaviors that reflect smarter shopping and food resource management strategies, enabling participants to stretch their food resource dollars to support a healthier diet.

Food resource management behaviors include healthful shopping practices and budget practices. While the guidelines recommend asking both adults and youth about these behaviors, states typically responded in greater numbers for adults than children (Table 15). The nature of shopping might explain the lack of response because most of these items apply more to adults than to children. Generally, 30 to 50 percent of adults showed improvement in the majority of measures.

The one measure presented for youth, reading nutrition labels, is the only behavior within this outcome that kids of the widest range of ages can partake in. With more than 19,000 participants, 30 percent showed improvement in this behavior. For adults, 60 percent of nearly 7,000 participants improved on shopping with sales or coupons, and 51 percent of 15,000 participants showed improvement on reading nutrition labels.

[k] Outcome definitions from the SNAP-Ed Toolkit, accessed here: https://snapedtoolkit.org/framework/index/

Example Programs

Oregon State University Extension Service

Food Hero* and the *Oregon Hub Model

SNAP-Ed delivery in Oregon takes a multi-level and comprehensive approach, combining programs across the three intervention types (DE, SM, and PSE), to maximize reach to SNAP-eligible Oregonians.

Food Hero, the signature program of Oregon SNAP-Ed, is social marketing campaign which provides Oregonians with access to nutrition education and resources. Focusing on research-based, participant-directed fruit and vegetable messages, the campaign reaches target populations through high-visibility communication channels. It has been widely adopted by other state and local organizations. *Food Hero* activities are undertaken in support of localized interventions that improve access through a variety of PSE strategies.

PSE activities are organized under the ***Oregon Hub Model***. Developed in 2015, the *Hub Model* helps to focus SNAP-Ed program delivery across the state. The main purpose of each Hub is to increase the opportunities for SNAP-eligible people to make healthy choices within their budgets and to encourage active lifestyles, consistent with current federal guidelines. Each Hub operates with a combination of PSE interventions with direct education programs and social marketing through *Food Hero*. Hubs are largely based on existing geographic divisions, with multi-sector coalitions and local partners contributing to shared progress on key health goals.

These programs in Oregon are illustrative of a complex and multi-layered strategic approach that uses varied tools, leverage points, and delivery extenders to maximize statewide impacts. The reach achieved has been significant in FY2019, with Oregon State University reporting that:

- Oregon SNAP-Ed conducted programs at 772 SNAP-Ed intervention sites.
- At 300 sites where direct education was conducted, 66 percent (199) included exposure to additional interventions (PSE and/or *Food Hero* social marketing).
- Of the 289 sites at which PSE strategies were adopted, 75 percent (217) also had one or more of the following components: SM, DE, and/or parent involvement.
- Of the 217 sites at which PSE strategies were adopted along with other strategies implemented, 53 percent (116) had one additional strategy adopted, and 47 percent (101) had two additional strategies adopted. The strategy most often implemented with PSE was SM through indirect channels.

MT3: Individual Level – Physical Activity and Reduced Sedentary Behavior

Two-part indicator measuring behavioral changes to increase physical activity and/or reduce sedentary behavior. Physical activity is defined as any body movement that works muscles and requires more energy than resting. Sedentary behavior is defined as too much sitting or lying down at work, at home, in social settings, and during leisure time. Both increasing physical activity and decreasing sedentary behaviors is important for overall health.

Physical activity measures assess whether participants increased their exercise frequency, while the sedentary behaviors targeted for reduction include television viewing and video game playing. Table 16 shows that around one-third of youth reportedly improved their frequencies of both exercise and sedentary behaviors, with 36 percent of 53,000 participants increasing frequency of "physical activity and leisure sport." Similarly, nearly half of adults reportedly increased their exercise frequency (49 percent of nearly 21,000 participants).

MT5: Environmental Settings – Nutrition Supports

Sites and organizations that adopt PSE changes and complementary promotion often including favorable procurement, meal preparation activities, or other interventions that expand access and promote healthy eating; associated potential audience reached.

Unlike the previous outcomes, MT5 concerns PSE change efforts regarding nutrition as opposed to individual-level improvement through direct education. Table 17 reports that 27 of 37 states reported data for MT5 – the highest rate of any outcome – showing the increased significance of PSE change as a primary intervention method. Because some states did not respond to each individual measure within MT5, these numbers present a conservative estimate of the impact of PSE change efforts.

Twenty-four states reported a combined 2,443 sites or organizations that made at least one change designed to improve healthy eating. Further, states reported 809 policy changes, 2,950 systems changes, 2,550 environmental changes, and 1,353 promotional efforts, with an estimated reach of nearly 3.0 million people. This number is significant because of the nature of PSE change interventions – changes to structural conditions have the potential to be more durable and long-lasting, with continued impact as new individuals enter the community in which the change was affected. They also provide a stronger base on which to build future interventions designed to further improve health outcomes.

3. Other Outcomes

As noted above, the response rates for non-priority outcomes were generally low. However, there are a number of key outcomes for which sizable numbers of states responded.

MT4: Individual – Food Safety

> *[This indicator measures] changes in individual and group behaviors that reflect MyPlate principles and are on the pathway to achieving the current Dietary Guidelines for Americans recommendations.*

Food safety is another key component of SNAP-Ed education efforts. It is vital that participants understand not just the nutritional quality of their consumption choices but also how the preparation of these foods affects bodily health. As shown in Table 18, seven states reported that 39 percent of nearly 30,000 youth participants increased their frequency of washing hands and cleaning surfaces. Similarly, 10 states reported that 41 percent of 14,500 adult participants improved on this same measure.

Program Successes

Kansas State University Extension

SNAP-Ed's Reach Across Kansas

Approximately one in three Kansas adults have obesity, and one in four are physically inactive. Meanwhile, nearly one in five (18 percent) of Kansas children are food insecure. As these data suggest, the need for SNAP and SNAP-Ed in Kansas is high, and on average 219,738 Kansans per month received SNAP benefits in 2018.

SNAP-Ed provided through Kansas State University directs nutrition education to youth, adults, and seniors – doing so directly and through partnerships with local agencies and organizations – using multi-level interventions and community engagement to multiply impacts. Kansas SNAP-Ed programming is coordinated and delivered by Kansas State Research and Extension (KSRE) in 72 Kansas counties in partnership with the Kansas Department for Children and Families.

As noted in a recent report for the Kansas State University College of Agriculture and KSRE:

> *KSRE reached 40,717 Kansans through SNAP-Ed programs in 2018. The Kansas SNAP-Ed programs partnered with more than 350 organizations, collaborated across 11 coalitions, and implemented 26 activities that impact PSE change. After participating in SNAP-Ed programs, participants reported increased daily physical activity, increased food and vegetable consumption, increased whole grain consumption, improved food resource management skills, and improved food safety practices.*[42]

The report also extrapolates the healthcare savings that may be realized in Kansas on an annual basis through improved health for SNAP and SNAP-Ed recipients. Citing research published in *JAMA Internal Medicine*,[43] it is noted that participation in SNAP is associated nationally with lower healthcare expenditures of approximately $1,400 per participant per year. With approximately 220,000 Kansans participating in the SNAP program in 2018, the report extrapolates that SNAP in Kansas may "reasonably be associated with up to $308 million in cost savings due to lower healthcare expenditures."

Table 14. Medium Term 1: Individual Level – Healthy Eating (n = 24)

Outcome	Youth				Adults			
	# Improved	% Improved	Participants	# States	# Improved	% Improved	Participants	# States
Throughout the day or week:								
Eating more than one kind of fruit	8,807	33%	26,631	8	7,506	41%	18,392	13
Eating more than one kind of vegetable	11,348	32%	35,283	13	7,483	40%	18,631	9
Using MyPlate to make food choices					1,214	29%	4,119	5
Frequency:								
Drinking water	2,306	13%	17,665	4	4,906	43%	11,290	7
Drinking fewer sugar-sweetened beverages	26,917	45%	60,312	16	7,391	42%	17,788	14
Consuming low-fat or fat-free milk products	11,707	35%	33,565	10	5,827	42%	13,919	9
Eating fewer refined grains	2,131	38%	5,652	4				
Eating fewer sweets								
Servings:								
Cups of fruit consumed per day	8,394	41%	20,271	7	8,863	41%	21,627	17
Cups of vegetables consumed per day	8,105	41%	19,977	7	9,046	42%	21,582	17

Table 15. Medium Term 2: Individual Level – Food Resource Management (n = 23)

Outcome	Youth				Adults			
	# Improved	% Improved	Participants	# States	# Improved	% Improved	Participants	# States
Healthful Shopping Practices:								
Choose healthy foods for my family on a budget					1,713	32%	5,272	7
Read nutrition facts labels or nutrition ingredient lists	5,720	30%	19,289	7	7,752	51%	15,188	15
Buy low-fat dairy or milk products					886	33%	2,688	3
Buy foods with lower added salt/sodium					738	21%	3,496	3
Stretch Food Dollars:								
Not run out of food before month's end					4,516	40%	11,347	14
Compare prices before buying foods					7,123	42%	17,089	17
Identify foods on sale or use coupons to save money					4,144	60%	6,897	4
Shop with a list					8,313	42%	19,895	19

Table 16. Medium Term 3: Individual Level – Physical Activity and Reduced Sedentary Behavior (n = 25)

Outcome	Youth				Adults			
	# Improved	% Improved	Participants	# States	# Improved	% Improved	Participants	# States
Increased Physical Activity, Fitness, and Leisure Sport								
Physical activity and leisure sport	19,351	36%	53,674	12	10,237	49%	20,852	14
Physical activity when you breathed harder than normal	5,824	32%	18,170	6	2,563	42%	6,047	11
Physical activity to make your muscles stronger					4,696	41%	11,461	12
Reduced Sedentary Behavior								
Television viewing	12,341	36%	34,398	6				
Computer and video games	4,453	36%	12,539	4				

Table 17. Medium Term 5: Environmental Settings – Nutrition Supports (n = 27)

Outcome	# of Items	# of States	Avg. (n = 24)
Adoption:			
Number and proportion of sites or organizations that make at least one change in writing or practice to expand access or improve appeal for healthy eating	2,443	24	102
Total number of policy changes	809	17	34
Total number of systems changes	2,950	19	123
Total number of environmental changes	2,550	21	106
Total number of promotional efforts for a PSE change	1,353	16	56
Potential Reach:			
Total potential number of persons who encounter the improved environment or are affected by the policy change on a regular (typical) basis and are assumed to be influenced by it	2,985,735	24	124,406

Table 18. Medium Term 4: Individual – Food Safety (n = 13)

Outcome	Youth				Adults			
	# Improved	% Improved	Participants	# States	# Improved	% Improved	Participants	# States
Clean: wash hands and surfaces often	11,508	39%	29,676	7	5,896	41%	14,506	10
Cook: cook to proper temperatures					5,671	69%	8,260	6
Chill: refrigerate promptly	6,708	29%	23,355	4	5,377	56%	9,536	5

MT6: Environmental Settings – Physical Activity and Reduced Sedentary Behavior Supports

> *[This indicator is intended to identify] sites and organizations that adopt PSE changes and complementary promotion that expand access and promote physical activity and reduced time spent being sedentary . . . .*

Key Finding

Survey results suggest multi-level and multi-faceted PSE change focusing on nutritional or physical activity supports have been implemented across several thousand sites nationwide.

In order to facilitate improved physical activity outcomes among the SNAP-eligible population, it is important to engage in PSE change efforts that support individual health behaviors. Nineteen states reported on these PSE efforts (Table 19). Respondents reported engaging in PSE change with 693 sites. With 436 policy changes, 599 systems changes, and 738 environmental changes, states that responded to this outcome were extremely active in engaging in these efforts. These numbers are likely conservative given that the response rate for each item fell below the outcome's overall response count of 19 states. Adjusting for response rate suggests that the number of sites nationwide that made at least one change likely exceeds 1,000.

Table 19. Medium Term 6: Environmental Settings – Physical Activity and Reduced Sedentary Behavior Supports (n = 19)

Outcome	# of Items	# of States	Avg. (n = 19)
Number and proportion of sites or organizations that make at least one change in writing or practice to expand access or improve appeal for physical activity or reduced sedentary behavior	693	15	36
Total number of policy changes	436	12	23
Total number of systems changes	599	11	32
Total number of environmental changes	738	8	39
Total number of promotional efforts for a PSE change	166	10	9

MT12: Sectors of Influence – Social Marketing

> *This indicator is intended to identify the presence, characteristics, reach, and impact of social marketing campaigns . . . . The focus is on comprehensive, multi-level social marketing campaigns; the number of discrete campaigns that were conducted during the year; the topics and changes they sought; their scale—the reach to different population segments, the geographic areas targeted, and the delivery channels used; and, wherever possible, evaluation results.*

Eleven states reported on the number of social marketing campaigns during the assessment period. Respondents reported 18 social marketing efforts averaging about 3 million impressions each. Respondents did not provide enough data on the other elements of social marketing campaigns described above to address those items. Adjusting for response rate, LGU SNAP-Ed programs across the country likely operated more than 80 social marketing campaigns, with potentially hundreds of thousands of additional impressions not reported in the survey.

LT5: Environmental Settings – Nutrition Supports Implementation

This indicator measures implementation and effectiveness of PSE changes. Implementation is defined as the aggregate number of sites or organizations in each type of setting . . . that report a multi-component and multi-level intervention. Effectiveness is defined as the aggregate number of sites or organizations with improved food environment assessment scores.

Key Finding

Survey results and empirical research provide strong evidence of the importance of SNAP-Ed programming in improving participants' health.

Respondents provided information regarding the use of PSE change to facilitate nutrition supports across a variety of sites. With 9 states reporting, LGU SNAP-Ed programs helped to implement multi-faceted and multi-level PSE change in more than 1,300 sites or organizations. Adjusting for response rate and state population size, an average of 146 sites per state could indicate that the total number of such sites exceeds 4,000. This outcome specifically asks respondents to tally multi-faceted sites, which includes sites where PSE change was coupled with one of the following: evidence-based education, marketing, parent/community involvement, or staff training/continuous policy implementation. Nearly half of reported sites were places in which evidence-based education was the additional component added to PSE change.

Further, respondents reported that 134 of those sites that made a PSE change also showed improvement in a valid food environment assessment tool. For the 4 states that reported these values, this represented nearly one-third of total sites or organizations. While the response rate to this item is too low to extrapolate this finding across the country, it does provide evidence that PSE change has a good rate of success in states where the data are collected. Further systematic study of such programs is necessary to determine the nationwide effectiveness rate of PSE change efforts.

LT6: Environmental Settings – Physical Activity Supports Implementation

This indicator measures implementation and effectiveness of PSE changes. Implementation is defined as the aggregate number of sites or organizations . . . that report a multi-component and multi-level intervention. Effectiveness is defined as the aggregate number of sites or organizations with improved physical activity environment assessment scores.

Five states reported more than 600 sites or organizations that implemented PSE change and one of the additional components described in LT5. Adjusting for response rate, survey findings suggest there could be more than 3,000 such sites nationwide. Respondents did not provide detail on the number of sites or organizations that showed improvement in assessment scores.

Example Programs

Cornell Cooperative Extension

The New York Regional Approach to SNAP-Ed Delivery

In New York the State's Office of Temporary and Disability Assistance (OTDA) is responsible for operating the SNAP-Ed program under the brand of "Eat Smart New York" (ESNY). The program is administered regionally in NY: Cornell Cooperative Extension (CCE) manages seven of the ESNY regional offices, with each office being a nonprofit educational organization and part of the Cooperative Extension land-grant system.

CCE's SNAP-Ed program provides nutrition education workshops; materials and messages; and environmental, policy, and systems change activities and support. A particular emphasis is placed on programming that matches ESNY goals "for youth and adults to 1) eat more fruits and vegetables 2) drink less sugar-sweetened beverages 3) exercise more and balance calories eaten as part of a healthy lifestyle."[44]

The regional approach in NY enables CCE to customize programs to the particular needs and characteristics of New York's highly diverse regions. The programs highlighted by two of these CCE regions in Suffolk and Erie Counties illustrate the broad range of programs and PSE activities being deployed:

Cornell Cooperative Extension – Suffolk County

- School Wellness directs programming that supports multilayered nutrition and wellness plan development for the schools and communities.
- Smarter Lunchroom provides technical assistance to lunchroom food service directors.
- Healthy Corner Stores programming works to improve food options in underserved communities, expanding in-store availability of nutritious, affordable foods and beverages.
- Healthy Laundromats is a PSE approach that created opportunities for families to acquire nutrition knowledge and physical activity information through in-house TV and displays installed at laundromats.
- Suffolk CCE is also active in promoting the expansion of farmers markets within the region.

Cornell Cooperative Extension – Erie County

- CCE Erie County is using PSE approaches to provide "environmental nudges" to increase availability and visibility of healthy food choices in various settings including partnered food pantries, schools, and corner stores. The program encourages the use of strategic signage, bundling, display enhancement, and product placement.
- PSE programming seeks to wrap partnering organizations (including the schools, corner stores, and food pantries) in "a culture of health," using PSE approaches to provide ongoing nutrition education, healthy signage, and personnel training.
- Like Suffolk CCE, Erie CCE is also deploying Healthy Laundromats programming, and both regions have engaged laundromat operators to move from soda vending at their sites to bottled water.
- Healthy Pantry, a program conducted primarily in Spanish, provides packaged foods with healthy recipes. It is supported using flyers at schools and community venues soliciting donations of low-sugar and low-sodium foods.

C. Empirical Support for Significant Improvement in Outcomes

As noted above, data collection and aggregation remain significant challenges to demonstrating the effectiveness of SNAP-Ed programming. Low response rates to this survey do not necessarily indicate that states are not conducting a variety of activities designed to improve health outcomes. Rather, the many challenges of collecting, analyzing, and reporting data are likely responsible for the low response rate. Some program activities may not have adequate data collection, whereas some states with multiple implementing offices may not effectively aggregate data to the LGU. Additionally, some respondents indicated that the COVID-19 pandemic of 2020 prevented them from fully completing the survey or coordinating with other administrators to assemble all relevant data.

Given the institutional structure of SNAP-Ed, drawing conclusions about programming outcomes is difficult. With more than 100 total implementing agencies, about half of which are LGUs, there can be considerable variation in how programs are implemented, even with shared curricula and reporting guidelines in use. The findings presented above offer some evidence of the influence of SNAP-Ed programs – among the priority outcomes, states generally report improvements in the health behaviors of between one-third and half of participants. Combined with the empirical studies described in the first chapter, there is strong evidence for the continued importance of SNAP-Ed interventions in reducing negative health outcomes and improving the quality of life for SNAP-eligible populations.

Example Program

North Carolina State Extension

***Steps to Health* – Expanding Reach Through Social Marketing**

NC State Extension and its partners have developed a series of activity and action domains that address four areas of critical importance to SNAP-Ed, including:

- Educating SNAP-Ed recipients on dietary quality and nutrition choices
- Teaching about effective shopping behavior and food resource management
- Addressing food access and food security issues
- Enhancing understanding of the need for physical activity and the avoidance of a sedentary lifestyle.

In 2018 *Steps to Health* created its first **social marketing campaign** focused in 10 counties in southeastern North Carolina. A review of NC State's Extension programs notes that:

> *The eight-week campaign focused on the benefits of modeling healthy fruit and vegetable intake behaviors for mothers of young children through television, radio, digital media, billboards, gas pump toppers, posters, and promotional materials. Using online data tracking tools, the campaign reached a total of 902,382 low-income mothers an average of three times, for a total of 2,707,146 impressions.*[45]

COVID-19: Programmatic Changes to Address the Health and Economic Impacts of a Pandemic

Though this report details SNAP-Ed impacts during FY2019, it seems appropriate to provide some early perspective on the importance of SNAP-Ed during the COVID-19 pandemic of 2020. SNAP-Ed programs have served as an important resource for vulnerable populations through difficult economic and public health conditions. The recent pandemic is no exception – SNAP-Ed administrators within LGUs across the country have risen to the challenge, modifying their typical programming to adapt to changing conditions and seeking novel ways to leverage SNAP-Ed resources to provide additional relief.

The educational curricula provided by SNAP-Ed address many aspects of the pandemic: in addition to instruction on food preparation, nutrition, and exercise, instruction topics relevant to the recent crisis include handwashing, sanitizing kitchens, food budgets, and meal planning. Vulnerable populations served by SNAP-Ed are also more likely to develop COVID-19. The severity of the illness and associated economic stain disproportionately hurt minority communities[46] and those with lower incomes,[47] making SNAP-Ed a resource with particularly close ties to communities hardest hit by the virus.

LGU SNAP-Ed programs across the country have adjusted programming to continue serving their target populations during social distancing. Examples of SNAP-Ed programs adapted or created to respond to COVID-19 include the following:

University of Kentucky Cooperative Extension Service[48]

- Developed *Grab and Go* lessons connected to other state programs, including *Healthy Choices for EveryBody*, *Cooking Challenge*, and gardening curricula
- Distributed bags containing lesson documents, reinforcement items, seeds, and other materials
- Hosted photos shared by participants

FoodWIse, University of Wisconsin–Madison[49]

- Increased social media presence with a weekly calendar
- Shared posts on county-level pages to expand reach, including links to the FoodWIse *Quick Tips* videos and the *Build a Better Snack* tip sheet
- Collaborated with the Wisconsin Depart of Health Services and Extension to develop evidence-based tips for safe gardening share models for ensuring the safety of farmers markets that accept SNAP EBT

Continued on next page.

COVID-19: Programmatic Changes, cont.

University of Nebraska–Lincoln and South Dakota State University[49]

- Jointly developed website and video series (as a collaborative effort of the SNAP-Ed and EFNEP programs at these institutions) entitled "The Dish – Real Talk About Food"
- Produced videos designed to provide information on food preparation, grocery shopping, and healthy eating to families experiencing financial hardship due to the pandemic

Cornell Cooperative Extension of St. Lawrence County, New York[50]

- Organized a food distribution program, which included participation from a SNAP-Ed nutritionist who provided recipe cards matched with items included in the food boxes

University of Arkansas at Pine Bluff[51]

- Developed a program to distribute UAPB-grown sweet potatoes to residents in need, including people who have participated in SNAP-Ed cooking classes

West Virginia University Extension[52]

- Experienced dramatic growth in the annual "Grow This: WV Garden Challenge" in March 2020 – participants indicated that food security issues related to the pandemic served as motivation to participate
- Encouraged families to start miniature gardens and share their progress

With close ties to their communities and intimate knowledge of the unique problems their residents face, LGU SNAP-Ed programs can continue to play a role in relief efforts during this crisis. Examples listed above provide evidence that LGU SNAP-Ed programs have responded to the needs of their communities through all three intervention types (direct education; social marketing; and policy, systems, and environmental change). With pandemic-related hardship expected to last through 2021, SNAP-eligible populations would continue to benefit from the creation or expansion of similar programs.

VI. Conclusion

Land-grant university SNAP-Ed activities continue to generate substantial impacts across the states, counties, and communities that comprise the United States. LGUs are developing, deploying, and leveraging diverse, evidence-based approaches to provide education to SNAP-eligible populations that helps them make informed, healthy choices in the use of their SNAP dollars and to generally improve their health and quality of life. Furthermore, SNAP-Ed is an improving and evolving system, integrating new best-practice methodologies, such as PSE approaches, to improve and enhance its positive outcomes.

This fifth report on the SNAP-Ed activities of LGUs is particularly timely, coming at a point when the COVID-19 pandemic and its impacts on the economy have hit the nation and individual families hard. With an expanding population facing economic challenges, the work of SNAP-Ed – informing behaviors that improve individual health and optimizing use of SNAP benefits nutrition – is as important as it has ever been. Evidence shows SNAP having a strong positive return for the nation, and SNAP-Ed provided through land-grant universities is found to be a highly important contributor to achieving that return.

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